High Commission of India
Colombo
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07/06/2015

Tender Notice for Supply of Medical Equipment to Dickoya Hospital, Hatton, Sri Lanka

Terms and Conditions

High Commission of India, Colombo on behalf of Government of India invites sealed quotations (Bid Reference: Col/Com/228/4/2010-Equip) under the two bid system (technical and financial) from eligible bidders for supply and Installation of Medical equipment to District Hospital in Dickoya

2. Interested bidders may purchase the Tender document from Project Officer (Development Cooperation), High Commission of India, 36-38, Galle Road, Colombo-03, between 8 June 2015 and 25 June 2015 against payment of SLR 2,000.00 (equivalent INR 1000.00) per package (non-refundable) in cash or Demand Draft drawn in favour of High Commission of India, Colombo. These documents can also be downloaded from www.hcicolombo.org and www.eprocure.gov.in, in which case a draft for SLR 2,000/- (equivalent INR 1000.00) per package drawn in favour of "High Commission of India, Colombo" towards the fee of tender document should be enclosed with the technical bid.

3. The technical bid (Original & Duplicate) and the financial bid (Original & Duplicate) documents should be sealed by the bidder in separate covers duly superscribed and these four sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed and marked "**Tender for Supply, Delivery and Installation of Medical Equipment to Dockoya Hospital, Hatton, Sri Lanka".** The technical bids will be opened in presence of authorized representatives of bidders **at 1530 hrs on 7th July 2015** in the High Commission of India, Colombo, Sri Lanka. Sealed quotations may be submitted under the two bid system (technical and financial) by manufacturers or authorized dealers/sales agents of items mentioned in **Annexure A** (as per listed specifications) based in Sri Lanka or India.

4. Bidders requiring any clarification on any issue of the Tender document may take up with the Technical Evaluation Committee (TEC) during the Pre-Bid meeting at 1500 Hrs on 23 June 2015 in the High Commission of India, 36-38, Galle Road, Colombo-03.

5. A certificate guaranteeing that adequate amount of spare parts will be available for **at least seven years** including warranty period may be provided along with the technical bid.

6. Bid may be submitted to **Project Officer (Development Cooperation),**

High Commission of India, 36-38, Galle Road, Colombo 3 on or before **1500 hrs on 7th July 2015** and acknowledgement obtained.

7. Bidders are required to bid for entire items in a package. Bidder who have not quoted for any item in a package will be disqualified.

8. **OPENING OF BIDS**: The sealed quotations (technical bids) will be opened in presence of authorized representatives of bidders at **1530 hrs on 7 July 2015** in the High Commission of India. After scrutiny of technical bids by the TEC, financial bids of only those bidders who qualify the technical evaluation will be opened at a time and date to be intimated later.

9. **EARNEST MONEY DEPOSIT (EMD)**: Technical bids should contain EMD (May please refer clause 13) in the form of a DD/Guarantee drawn in favour of High Commission of India, Colombo. Alternatively, a standard bid guarantee (format as in **Annexure D**) issued by a commercial bank approved by the Central Bank of Sri Lanka, in favour of the High Commission of India, Colombo of this amount may be provided. The Bid Guarantee of all unsuccessful bidders will be released after the tender is finalized. The Bid Guarantee should be valid for **a minimum period of 225 days** from the date of opening of tenders. **Earnest Money Deposit/ Bid Guarantee must be submitted with the technical bids (in the same envelope) otherwise the bid will be rejected.**

10. **Documents establishing goods conformity to tender specification.**

I. The bidder shall provide in its bid the required as well as the relevant documents like technical data, literature, drawings etc. to establish that the goods and services offered in the tender fully conform to the goods and services specified by the purchaser in the tender documents. For this purpose the bidder shall also provide a clause-by-clause commentary on the technical specifications and other technical details incorporated by the purchaser in the tender documents to establish technical responsiveness of the goods and services offered in its tender.

II. If a bidder furnishes wrong and/or misguiding data, statement(s) etc. about technical acceptability of the goods and services offered by it, its tender will be liable to be ignored and rejected in addition to other remedies available to the purchaser in this regard.

11. **Minor Infirmity/Irregularity/Non-Conformity:** If during the preliminary examination, the TEC find any minor infirmity and/or irregularity and/or non-conformity in a tender, the High Commission of India may waive the same provided it does not constitute any material deviation and financial impact and, also, does not prejudice or affect the ranking order of the bidders. Wherever necessary, the purchaser will convey its observation on such 'minor' issues to the bidders asking them to respond by a specified date. If the bidder does not reply by the specified date or gives

evasive reply without clarifying the point at issue in clear terms, that tender will be liable to be rejected.

12. **Alteration and Withdrawal of Tender**

i. Bids are not permitted to alter / modify after the prescribed.
ii. No bids should be withdrawn after the deadline for submission of tender and before expiry of the tender validity period. If a bidder withdraws the tender during this period, it will result in forfeiture of the earnest money furnished by the bidder in its tender.

13. **PACKAGES FOR BIDDING:** Bidders may bid for one or more of the following packages (Details in **Annexure A)**. The EMD payments may be made accordingly.

Package	EMD in Sri Lankan Rupees	EMD in Indian Rupees
One (Nursery Equipment)	400,000/-	200,000/-
Two (ICU Instrument & Devices)	400,000/-	200,000/-
Three (Neonatal ICU, ICU & Surgical Equipment)	2,140,000/-	1,070,000/-
Four (Obstratic & Gynecology Equipment)	200,000/-	100,000/-
Five (Opthalmology and ENT Diagnostic & Treatment Equipment)	320,000/-	160,000/-
Six (Operation Theatre Equipment)	940,000/-	470,000/-
Seven (OPD Equipment)	220,000/-	110,000/-
Eight (Radiology-Investigative Equipment)	320,000/-	160,000/-
Nine (Laboratory Equipment)	400,000/-	200,000/-
Ten (General Laboratory Equipment)	280,000/-	140,000/-
Eleven (Dental Equipment)	18,000/-	9,000/-
Twelve (Blood Bank Equipment)	166,000/-	83,000/-

14. **VALIDITY AND CURRENCY OF BIDS:** All bids shall hold good for acceptance for a minimum period of **180 days** from the date of closing of tender. The price quoted in the Price Schedule Form (at **Annexure B**) should be in Sri Lankan Rupees for local bidder and in Indian Rupees for Indian bidder and written clearly in ink or typewritten. The total amount of the bid should be given in words as well as in figures.

15. **PRICE QUOTATIONS**: The price as quoted in the Price Schedule Form (**Annexure B**) should be as of point of delivery, Installation and Training. The price both exclusive and inclusive of all taxes, duties and levies etc must be quoted and the taxes, duties and levies etc. as applicable may be quoted separately. The VAT registration number should be indicated, if registered for VAT. If the bidder is not registered for payment of VAT, a certificate to that effect, obtained from the Commissioner General of Inland Revenue, should be annexed to the tender.

16. The bidder should provide the following:

With the Technical Bid:

(i) Self-attested photo-copy of registration of the company/firm/ proprietorship with the concerned Sri Lankan / Indian authorities.

(ii) Annual Report (where statutorily required to be filed), and Audited Financial Reports for the last 3 years.

(iii) Details of experience in the field of supplying similar items to Government or companies in Sri Lanka or in India

(iv) Manufacturer's authorization letter authorizing the bidder to supply the goods.

(v) Documentary evidence to establish conformity of the goods to the technical specifications in the bidding documents along with the Technical Specification Form (**Annexure A**).

(vi) Documents and information as required in the Manufacturers Authorization Form (**Annexure C**)

(vii) All equipment offered should be established brands with a previous history of supply in Sri Lanka or India. Bidders should either be ISO 9001 certified Medical Equipment companies registered with the Ministry of Heath, Government of Sri Lanka or with relevant authorities of Government of India. A certified copy of such registration should be submitted with the technical bid.

(viii) The bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the goods during the warranty period.

(ix) EMD as mentioned in clause 9 above

With the Financial Bid:

(i) Price quotation in the Price Schedule Forms (as in **Annexure B)**
(ii) The price should be quoted only in Sri Lankan Rupees.

17. Any alteration or deletions in the bid should be authenticated by the *full signature* of the bidder.

18. **WARRANTY*:*** The Supplier shall provide on-site standard warranty as given by the manufacturer or minimum of one year. In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period as originally agreed. Suppliers shall ensure the availability of after sales service for a period of **at least seven years** including warranty period. The warranty period shall be **as specified in the technical specifications**. Supplier shall also carry sufficient inventories to assure ex-stock supply of consumables and spares in Sri Lanka. **All charges with regard to the supply of spare parts, labour, travel, per diem and accommodation to supplier's staff etc. shall be borne by the supplier during the period of warranty. No additional expenditure for services rendered during the above period will be paid.**

19. **PERFORMANCE GUARANTEE**: The successful bidders shall submit, within **fourteen** days after the award of tender, a Performance Guarantee provided by a commercial bank or an insurance agency approved by the Central Bank of Sri Lanka, of an amount equal to ten percent (10%) of the value of order, drawn in favour of the High Commission of India, Colombo for the due execution of the contract within the specified period. The Performance Guarantee should be valid for a period of **150 days** from the date of award. If the Performance Guarantee is not submitted within **14 days** of the letter of award, the award will be cancelled and the Guarantee will be forfeited. The EMD of the bidder, whose tender is accepted, will be discharged when the said bidder's Performance Guarantee has been accepted.

20. **DELIVERY: The successful bidder must complete delivery, as stipulated above, of the items within a period of 90 days from the issue of Purchase Order.** Payment will be done only after successful supply and installation of equipment at Dickoya hospital. Breakage, if any, in transit during the supply period shall be the responsibility of the supplier and should be replaced free of cost. If the successful bidder fails to hand over within the stipulated period, liquidated damages @ 0.5% of the tender amount shall be

levied for a delay of each calendar week or part thereof, subject to a maximum of 10%.

21. **MODE OF PAYMENT**: Payments will be released only after the items as tendered are handed over/delivered and installed at Dickoya Hospital, Hattor, Sri Lanka in perfect working condition and physical verification of the supplies, as also technical verification has been carried out by a competent team authorized by the Government of Sri Lanka/ High Commission of India. Upon completion of delivery, the items will be inspected and defect, shortcomings or non-conformity to specifications, if any, will be brought to the notice of the Bidder who should take immediate action to rectify those **within seven days**.

22. **RETENTION MONEY:** Retention money to the extent of 5% of the invoice amount will be retained up to the warranty period.

23. Any dispute or difference regarding the interpretation of the provisions of the Agreement/Contract shall be resolved amicably between the parties. If the dispute is not resolved through mutual consultations within a period of six months, either party may refer the dispute to arbitration in accordance with the Arbitration & Conciliation Act 1996 of India as amended from time to time. The number of arbitrators shall be one and that the place of arbitration shall be New Delhi, India. In such a situation the applicable law will be the law of India. The language of the Tribunal shall be English. The cost shall be borne by the parties equally unless otherwise determined by the Arbitral Tribunal.

24. **ACCEPTANCE OF TENDERS: The High Commission of India** reserves the right to accept or reject any or all of the tenders in full or in part of the bid without assigning any reasons or incurring any liability thereof.

Annexure A : Specification for Supplies

Annexure A : Specification for Supplies

Package ONE : Nursery Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Baby basinet	Size of Basket – 75 to 77 x 40 x 42 cms Height of the Bassinet from floor to basket top 103-105 cams. Strong CR ERW steel stand on four rubber stumps with hanging basket with removable mosquito net of aluminum rod. Epoxy created at least 50 micron		4
2	Open care system	1 Description of Function 1.1 Required for care of new born and infants 2 Operational Requirements 2.1 Complete system with cart and oxygenation facility is required. 3 Technical Specifications 3.1 Essential parts : Cart & bassinet Warming system with controls & alarms. Examination light Storage space- 2 sliding drawers below bassinet 2 platforms of the size 9” x 12” capable of holding up to 5 Kgms of equipments. Cart: Should swivel on 4 wheels of at least 5” dia- with foot operated., 2 front lockable wheels.		5

		Dimensions:- Height : 180-200 cms, Width : 60-70 cms, Depth : 100-120 cms. Working level : 95-110 cms and adjustable. Bassinet : 1 fixed and 3 movable transparent side walls :Portion above X-Ray cassette holder radiolucent. Mattress- Width : 55 – 60 cms, Length : 65- 70 cms, Thickness : Minimum 4 cms Material : Soft, Comfortable, easy to clean, radiolucent. Bassinet tilt in steps of 6 – 8 degrees, Trendelenburg or reverse Trendelenburg Warmer module swivel : 45-65 degrees on either side Warming systems- Modes :Manual & skin. Manual mode :Adjustable in steps from zero to 100 Skin mode - Method : Flexible, unbreakable skin temperature probe Set point range : 34 – 38 degrees C. Skin temp variability at Temperature equilibrium :+ 0.2 degrees C Skin temperature display- Accuracy : + 0.2 degrees C. Type : digital LED with 0.1 degree resolution. Correlation of displayed And actual skin temp : difference £ 0.2 degrees C. Silence/ Reset switch : To silence the alarm & reset set point. Alarms Probe failure Heat failure High and low temperature Power failure System failure Examination light : Illuminance 100 foot candles at mattress center Storage space : 2 drawers, preferably covered and sliding Pulse oximeter : to measure oxygen saturation and heart rate resistant to motion artifact. Able to pick up signals in low perfusion states (Price to be quoted separately). CPAP system : Flow driven (Price to be quoted separately). With air oxygen blender and FiO2 control, with heated humidifier, airway pressure		

		display 0- 15 cm H2O, With bonnet, cap and nasal prongs (10 of each size) for babies 600 gm-4000 gms, with reusable circuits, with 1 reusable flow generator Power requirements : 220/240 V AC, 50/60 Hz, Accessories I.V. line pole with pivot bracket : should be able to accommodate 2 fluid bottles Monitor shelves : 2 in number Should support upto approx. 20 kgs per shelf or upto 25 kgs total on single side Standard X- Ray cassette holder : sliding holder located just below undersurface of Bassinet, with markings to help placement of cassette Patient Probes : 4 reusable temperature probes 4 reusable oxygen saturation probes 2 patient extension cables for the saturation probes 4 System Configuration Accessories, spares and consumables 4.1 System as specified- 4.2 All consumables required for installation and standardization of system to be given free of cost. 5 Environmental factors 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%. 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug 6.2 UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up. 7 Standards, Safety and Training		

		7.1 Should be FDA/CE or BIS approved product 7.2 Shall comply with electrical safety requirements as per IEC or BIS regulations. 7.3 Comprehensive warranty & CMC after warranty. CMC would include all electronic and mechanical items including PCBs and heater elements. It should provide every year per unit four re-usable temperature probes, four oxygen saturation monitor probes, 20 Flow generator, and CPAP circuit. 7.4 Comprehensive training for lab staff and support services till familiarity with the system. 8 Documentation 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection. 8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual. 8.4 List of important spare parts and accessories with their part number and costing. 8.5 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.		
3	Phototherapy unit	1. Dimensions of the chamber should be at least 6 feet x 3 feet x 3feet. 2. Phototheraphy chamber of 18 UVA+18 NB UVB tubes designed for providing even irradiation of the body in the treatment area. 3. UV chockes must be provided to provide long life to the tube light and cooling fans for effective cooling of the unit. 4. integrated dosimeter system for easy calculation of irradiation levels. 5. The equipment have CE or FDA or ISI certification. 6. Advanced micro computerized electronic LCD/TFT Controller which allows setting of joules/time for UVA and milli Joules/time for NB UVB tubes. 7. Automatic computation of irradiation time from joules/time for NB UVB tubes. 8. Dose limit can be preset and cumulative dose is displayed instntaneously with provision of storage of data. Provision of 'software backup' is preferable. 9. Variation in irradiation is taken care by built in UVA/NB UVB sensors which		2

		should be able to detect all irradiation completely and uniformly. 10. Switches the system 'off' automatically with warming alarm at the end of set irradiation time. 11. Built in memory system that helps to avoide error in treatement. 12. Body to be of a metal which is rust free so as to ensure long rust free life of the unit. 13. Automated and/or mechaical safety mechanism to prevent excess irradiation to the pantients so as to avoid/prevent burns etc. 14. Electrical leakage circuit tripper/breaker in each panel to ensure maximum safety of the patient. 15. Open top unit to ensure maximum ventilation and prevent claustrophobia. 16. Mechanism to provide information to the patient regarding duration of treatment and time left for exposure during their treatment. 17. Computer for patient data management with software and interface for the phototheraphy chamber which is RS-232 compatible. 18. To be supplied with suitable stabilizer. 19. Black UV Goggles and Eye pads cover (3 pairs each for adult and 3 pair for children) as protective+.		
4	Baby warmer unit	· Infant warmer to be used in neonatology. · The unit should conform all relevant international, national and local standards. **Specifications** · Temperature control: · Range 30-38° C · Skin range 25 – 42 ° · Increment 0.1° · Display Digital · Control Unit (to be supplied with.) · Automatic heat control type · Set point mechanism · Heater Indicator. Alarms (Audible and Visual)		2

		· High air temperature · Sensor disconnect · Power Failure · Alarm in manual mode: every 15 minutes with automatic shutoff **The warmer should includes:** · Self- check features · Breaks for casters · Skin sensor · Supplemental humidity · Protection against breaks and bursts of radiant and light source · Spares and accessories · Service and users manuals **Accessories:** · No. of hand ports 6 · No. of tubing ports 6 · No. of oxygen inlet port 1 · Backup thermostat · Examination Light 50 W Halogen · Radiant heat source Quartz tube 600w · Phototherapy lights · Resuscitation equipment packages · X-Ray cassette holder		
5	Infant weighing machine	• Capable of weighing 0-20 Kg with a count of 50 gms with 0 adjustment • Infant weighing pan should be stable with smooth surface. • Epoxy coated		1
6	Infant meter	• Infant meter for measuring length of Baby • Material Acrylic • Sleek broad acryl base with one sliding side. • Marking for direct reading in centimeters for 0 to 90 cms.		1

		• Folding sides for easy storage.		
7	**Infant Staid Meter Paediatric**	**1. Description of Function** 1.1 Used for routine height and weight measurements of patients. 2. **Operational Requirements** 2.1 It should be a platform type of weight and height measuring scale on which the patient can stand for measurement of weight and height. 3. **Technical Specifications** 1. It should be a robust model for day to day rough use in wards, OPD. 2. It should measure the weight in kilogram. 3. There should be LCD display of weight. 4. It should measure the height in centimeter. 5. It should be equipped with tare function to allow a baby to be weighed in its mother's arms. 6. The graduation of measuring weight should be 50 gm. 7. The height measuring rod should be attached with it. 8. The scale should also have BMI function. 9. It should measure the height from 60 cm onwards. In other words, the minimum height which it can measure should be 60 cm. 10. It should be mounted on transport castors to allow free mobility from one place to other. 5. **Environmental Factors** 5.1 Shall meet IEC-60601-1-2: 2001 (Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive. 5.2 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90% 5.3 The unit shall be capable of operating continuously in ambient		1

		temperature of 10-40 deg C and relative humidity of 15-90%. 6. **Power of Supply** 6.1 Should work on 220-240V AC as well as rechargeable batteries. Main adaptor to be supplied. 7. **Standards, Safety and Training** 7.1 Should be FDA, CE, UL or BIS approved product. 8. **Documentation** 8.1 User / Technical/ Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection from factory. 8.3 List of important spare parts and accessories with their part number and costing. 8.4 Log book with instructions, for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.		
8	Instruments for skin graft I. Electric dermatome II. Zimmer mesher III. Watson skin graft knives	1.Electric Dermotome Slim line demotome set. Should include a hand piece with roller, hand assembly plate. 4nos. blade clip with width (2-2.35cm, 5-5.5, 7-7.5 & 10-10.5cm). Operable on universal power supply 220V with power cord. Accessories should include screw driver for dermatome, carry case of plastic & sterile dermatome blades (box of 10). 2.Zimmer Mesher Stainless Steel 3.Watson skin graft handle with 12 knives		1 each

9	Wash Tub	Size: L 1550/1850mm, W:780mm, H:590/1000mm. Power 230V, 50 Hz, 1kW. Guaranteed non trust technology. The lifting tub should be step-less with adjustable height from 590-1000mm by electromechanical actuator device that ensures an optimal nursing position throughout the care. It should have access from three sides and a large foot freedom for the staff. The tub body should be completely closed and should be made of easy to clean, absolutely acid and mineral resistant glassfibre-polyester. For the patient security, there should be integrated hand grips on both sides which make getting in and out very easy **Mobile Wash Trolley (Shower Trolley and Panel for Burns Patients):** Size: 1950/2050mm, W 630-830mm, battery operated 24 V, Power for charger: 230V, 50Hz, 0.2KW. Guaranteed non rust technology. It should be completely made of stainless steel. Height should be adjustable from 540-1000mm with scissor type hydraulic lifting and lowering mechanism, movable frames, adjustable stretcher position, side rails and padded mattresses that ensures an easy and hygienic patient care and secure transport from bed to showering room. The stretcher plate should be made of water-proof laminated plastic and should be specially adjustable both in Trendelenberg and anti-Trendelenberg position. The padded shower mattress should be made of skin soft, fully disinfectable PVC the included water drainage channels, drainage valve, stopper and drainage hose for fast water drainage. • Wall support for holding the shower mat/padded mat. • Shower mattress –tub form • Multicare padded mattress. • Head wedge for shower trolley and multicare. • Replacement battery – 24 Volt • External charging station 24 Volt		1
10	Set of Surgical Instruments	SS Tray with Lid –Length 350mm, Width 250mm, Height 50 mm- 1 No. Kidney Tray –Length 200 mm, Width 90mm, height 40mm -1 No. Gallipot 1 nos.)$2_{1/2"}$ Diameter -1 No		2

		Towel Clips (Mayo's/Bcakhaus) length 10 cms-4 Nos. Allis Forcep 6" -2 Nos. Needle Holder 6" ans 8" (Mayos Hegar)-1 each Scalpel Handle No.4 -1 No. Artery Forceps Mosquito-6" -6Nos. Artery Forceps (Spencerwell"s/crile)-6"-6 Nos. Kockers artery Forceps Straight-6" -2 No. Forceps (Toothed and Plain) -2 each Czemy Retractor -2 Nos. Langenbek Retractor Blade Size 1 ¾' x ½" -2 Nos. Scissor Dissecting (Metzenbaum)-7" -2 Nos. Scissor Suture Cutting Mayos -150mm -1 No. Sponge Holding Forceps -240mm -2 Nos. **Venesection Set** . SS Tray with Lid-Length 250mm, width 200mm, Height 50mm -1 Gallipots (10 cm Diameter) -1 Kidney Tray (Length 150mm, Width 70mm, Height 30mm) -1 Sponge Holding Mosquito Forceps – Length 240 mm-1 Artery Forcep Mosquito Curved – Length 150mm -6 Retractor (Kilner/Sengreen) –Length 150mm -2 Needle Holder (15 cm) Hegar's -1 Scalpel Handle No.3 -1 Dissection Forcep – 150mm with Tooth -1 Dissection Forcep-150mm without Tooth -1 Towel Clips – Mayos/Backhaus –length 10cms -4 Mayos Scissor – Length 150mm -1 Aneurism Needle – Symes pattern-Length 180mm -1 **Incision & Drainage** Tray SS with Lid –Length 250mm Width 200mm, Height 50mm -1 Kidney Tray (Length 150mm, Width 70mm, Height 30mm) -1 Scalpel Handle No.3 -1 Sinus Forcep – 180mm -1 Artery Forcep-150mm -6 Sponge Holding Forceps – Length 240mm -2		

		Towel Clips –Mayos/Backhaus- length 10cms-4 Currete -1 Galliots – Diameter 10 cms. -1 **Suture Removal Set** SS Tray with lid –Length 250mm, Width 200mm, Height 50mm-1 Tooth Forceps Dissecting -150mm-2 Galliots (10cms)-1 Artery Fprce {straogit6”} Kidney Tray (Length 150mm, Width 70mm, Height 30mm) -1 Stich Removal Scissors -2 Towel Clips (Mayos / Backhaus) –Length 10 cms -2 Sponge Holding Forceps – 240mm -1 **Suture Set** SS Tray with lid –Length 250mm, Width 200mm, Height 50mm-1 Kidney Tray (Length 150mm, Width 70mm, Height 30mm) -1 Galliots (10cms) -1 Scalpel Handle No.4 -1 Sponge Holding Forceps –8” -1 Tooth Forceps-1 Needle (1/2 Circel, Cutting) (Size 20mm, 30mm)-1 Scissor Mayos – 150mm-1 Towel clip (Mayos/Back haus) – Length 10 cms -1 Needle Holder (Hegar’s) -150mm -1 Artery Forceps (Mosquito)- 150mm -6 **Catheterisation Set** SS Tray with lid –Length 300mm, Width 200mm, Height 50mm -1 Cathers Foleys 16, 18, 20- 1each Bladder Syringe 150cc, Disposable Syringe-1 Metal catheter Sizes 1-12 -1 Set Introducer for Foleys catheter -1 Sponge Holding Forceps – 240mm -2 Towel Clips Mayos/Backhaus –Length 10 cms- 4		

		Sponge Holding Forceps – 240mm -1 Catheter Tray Stainless Steel Over all Size -17x4 ¾' x2 ¼" -1 **Scissors Set** Mayos Straight Scissors 6 ½" & 7 ½" -1,1 Mayos Straight Curved 6 ½" & 7 ½" -1,1 Metzenbaum Scissors 8" & 9 ½" -2,2 Mclachilan Scissors 6 ½' -2 Stich Removal Scissors (Mayos Clinic Stich Scissors) -4 Instruments Tray Stainless Steel with Lid –Length 300mm, width250mm, -1 Height 50mm. -1		
11	Computerized spirometer system (PFT)	1 Description of Function 1.1 Pulmonary function tests are a broad range of tests that are usually done in a health care provider's office or a specialized facility. They measure how well the lungs take in and exhale air and how efficiently they transfer oxygen into the blood. 2 Operational Requirements 2.1 System should be supplied complete with printer. 3 Technical Specifications 3.1 1. The following tests should be performed by the PFT Equipment. a. It should measure FEV , FVC, PEF, SVC,FEV %, MMEF, PIF, MVV,FRC, 1 1RV, TLC, FET, ERV, IRV, PiMAX/PeMAX, Diffusion capacity. b. DLCO, BRONCHIAL PROVOCATION TEST 2. Predicted value- depends upon national preference 3. Multi window lay out 4. Configurable print out format 5. Real time flow volume and volume time traces 6. Overlaying of previous test curves for comparison 7. Open & Closed flow/volume loop test technique possible 8. Powerful search capability 9. Storage- 1000 patients' tests including flow/volume loops and volume time		1

		curves. 10. Should have networking support 4 System Configuration Accessories, spares and consumables None 5 Environmental factors 5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or should comply with 89/366/EEC; EMC-directive. 5.2 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%. 5.3 The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug 6.2 UPS of suitable rating with voltage regulation,spike protection and maintenance free batteries for 60 minutes back up 7 Standards, Safety and Training 7.1 Should be FDA, CE, UL or BIS approved product. 7.2 Comprehensive training for lab staff and support services till familiarity with the system. 7.3 Electrical safety conforms to standards for electrical safety IEC 60601-1 (OR EQUIVALENT international/national standard)General requirement for Electrical safety of Medical Equipment. 8 Documentation 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 List of important spare parts and accessories with their part number and costing. 8.3 Certificate of calibration and inspection.		

		8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out. 8.5 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered. 8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual.		
12	Infant Incubator	1 Description of Function 1.1 An infant incubator provides a closed, controlled environment that warms an infant by circulating heated air over the skin. The heat is then absorbed into the body by tissue conduction and blood convection. Ideally, both the skin and core temperatures should be maintained with only minor variations. 2 Operational Requirements 2.1 High quality with humidity and servo controlled double walled with cabinet incubator. 2.2 Microprocessor controlled, easy access control panel with feather touch switches 2.3 With a facility to elevate base to offer adjustable range 2.4 Facility with both servo control as well as air temperature control and servo humidifier 2.5 Accommodates shelves and IV poles. 2.6 The quality of the material used should very high and crystal transparent 2.7 Super quality microprocessor based control system - self test functions are performed 2.8 System required complete with Oxygen port with tubing and Gel Mattress. 3 Technical Specifications 3.1 Continuous bed tilt up to 8° on either sides 3.2 Head end raise facility with auto lock. 3.3 Both visual and audible alarms for		1

		(i) Patient and control and high / low temperature alarm. (ii) Air circulation / probe / system / power failure alarm. (iii) Humidity control alarm. 3.4 Facility to take x-ray and weight without removing baby. 3.5 Facility to display and trends of temperature information on compatible monitors with other physiological parameter 3. 6 Height 140 cm + 5 cm, depth at least 60 mm , width at least 90 mm. Mattress to hood distance 40 cm working level – 90 to 100 cm. Iris port for tubing, probes, leads. 4cm thick gel mattress, easily cleanable. With at least 4" diameter caster wheel with swivel in all directions and with front lockable wheels. Two shelves cabinet with door. Weight 90-100 kg. 3.7 Patient control (Servo) mode – 35 deg-37 deg C. and Air Control (Manual mode)- 20 deg C to 39 deg C. 3.8 Air velocity less than 10 cm/sec with inner wall. 3.9 Temperature variability less than +/-0.2 deg C. and Temperature resolution 0.1 deg C 3.10 Average oxygen input concentration range 5-15 liters/min or 25-70%. 3.11 Humidification adjustable electronically with digital display. Standard: 10-80% dependent on nursery environment and incubator temperature setting. 3.12 Double wall canopy with Six hand ports with elbow operated flaps with separate ports for tubing. 3.13 CO2 flushing, according to IEC 601-2-19 / 105.1 Maximum C02 concentration inside incubator 0.2% 3.14 Servo control for Oxygen with integrated monitoring 3.15 Air filter :- 0.3 micron 3.16 Built in weighing scale with sensitivity of + 1 gm 3.17 Mattress should be radiolucent 3.18 Provision for X ray cassette holders 3.19 2 drawer storage facility and two platforms for keeping monitors , able to bear at least 5 kg weight each. 4 System Configuration Accessories, spares and consumables 4.1 System as specified		

		4.2 Two sets of extra non disposable temperature sensors and humidification sensors. 5 Environmental factors 5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive. 5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%. 5.3 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug 6.2 Suitable UPS with 30 Min Backup for complete system 7 Standards, Safety and Training 7.1 Should be FDA/CE or BIS approved product 7.2 Electrical safety conforms to standards for electrical safety IEC-60601-2-19:Medical Electrical Equipment part 2 Particular Requirements of Safety of Baby Incubator. 7.3 CMC should provide 4 non disposable temperature sensors and sensors for humidity control every year per incubator. 8 Documentations to be provided 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection. 8.3 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual. 8.4 List of important spares and accessories with their part number and costing. 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		

13	**ENT Diagnostic and Treatment Unit**	Rust free top with powder coating housing on lockable heavy duty castors. Transparent acrylic cover cabinet with OPD instruments Concealed powerful suction unit with foot control switch. Electronic temperature controlled water jet system with 0.1 deg. Seting range upto 100 deg. Cent. Universally adjustable Bull's Eye Lamp Foot operated, powerful spray system with micro-switching Solid state, fine cautery with different electrodes, with cutting & coagulating system. Convenient heat laryngeal mirror warmer system X-ray viewing box with CFL lights Space for instruments trays Medicine bottles and gauze box stand Storage drawers with locking facility Space for cold light source. Sinoscope 0deg. With stand. Approximate dimensions:HxWxL-150x60x70cm Optional items: Operating microscope, Fibre optic Headlight.		1

Annexure A : Specification for Supplies

Package Two : ICU Instrument & Devices

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Blood gas and Na+/K analyzer	A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:- pH, PCO2, PO2, Barometric pressure. Na, K, Ca, Cl Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure. Sample volume should be approximate 100 µl for all parameters. All calibration and cleaning cycles should be fully automated with user selectable calibration items. Calibration should be performed by liquid calibration for all parameters. The electrodes provided should be zero maintenance including the reference electrode. The system should have on board data manager to store all patient results, QC data and calibrations. The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously. A power fail protection for 20 min.to take all calibration and programmed data. The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen. A built in thermal printer should be provided to print out patient results. The system should work in discrete testing, ie, selectable parameter testing. Should be supplied with consumable, reagents and QC agents for 1000 tests, as		1

		per the user requirements so that they do not expire. Should not preferably use special gases.		
2	Suction machine (Heavy duty)	**Description of Function** To extract fluid from the body during surgery or emergency treatment **Operational Requirements** Shall have high vacuum suction capacity The machine should be portable on castors/mobile trolley **Technical Specifications** Heavy duty and noiseless with piston/cylinder technology. Auto cut-off for preventing entry of fluid in pump To facilitate maintenance the cover of machine should be easy to open from the top & sides. The suction machine should be capable of producing vacuum up to -90K Pascal, which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 15 litres or more per minute and can be regulated. It sould have two bottle of 4-5 liters capacity with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid. ON/OFF Switch and Power indicator. Body material: Base, top & Panel made of rust proof and corrosion resistant moulded ABS; Jar/Bottle material; Autoclavable polycarbonate. Optional inbuilt maintenance free battery. Battery backup upto 60 minutes on full charge. **System Configuration Accessories, spares and consumables** System as specified 3 core lead of 2 meter along with one 3 pins 15 amp. Plug -01 Power cable -3 crore lead of 5 meter along with one 3 pins 15 amp. Plug -01		2

		The following spares machine are also required:- Bottles 2 Nos. Lids 2 Nos. Rubber Seals 2 Nos. Blades 2 Nos. Suction tubing set 1 No. **Environmental Factors** The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90% The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%. **Power Supply** Power input to be 220-240 VAC, 50Hz fitted with Indian plug A fuse or a resettable circuit breaker f a appropriate capacity should be incorporated for protection of motor. Should work on 220-240V AC as well as rechargeable batteries. Mains adaptor to be suppled. **Standards & Safety** Should be FDA, CE, UL or BIS approved product. Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standards). Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2: latest edition or equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended. **Training** Comprehensive training for staff of user department and support services till famillarity with the system.		
3	Head light with light source	Fiber-optic head light with 3.5mm cable, light adjustable, light weight, head band supplied with suitable xenon light source. 4 port turret.		1

4	SYRINGE PUMPS	**1)** The syringe pump should be programmable, user friendly, safe to use and should have battery backup and comprehensive alarm system. **2)** Must Work on commonly available standard 5ml,10ml,20ml,50ml,60 ml Syringes with accuracy of minimum of +/-2% or better, with automatic syringe size recognition. **3) European CE or US-FDA approved product.** **4)** Flow rate programmable from 0.1 to 1000 ml/hr or more in steps of 0.1 ml/hr with user selectable flow set rate option. SAVE last infusion rate even when the AC power is switched OFF. **5) Bolus rate should be programmable to 40 to 1000 ml/hr or more with infused volume** **display and one key press bolus. Reminder audio after every 1 ml delivered.** **6)** Display of Drug directory of more than 50 drugs, customised and adjustable. **7)** Key board locking system for patient safety. **8)** Keep Vein Open (KVO) must be available at 0.1 ml or set rate User should have choice to disable KVO whenever desired. **9)** Selectable Occlusion pressure trigger levels selectable from 300/500/900 mmHg. **10)** Automatic detection of syringe size & proper fixing. Must provide alarm for wrong loading of syringe such as flanges out of slot; disengaged plunger, unsecured barrel etc. **11)** Manual pusher with plunger protection guard. **12)** Anti bolus system to reduce pressure on sudden release of occlusion. **13) Should have comprehensive ALARM package including: Occlusion limit exceed alarm.** **Near end of infusion pre-alarm & alarm, Volume limit pre-alarm & alarm, KVO rate flow,** **Low battery pre-alarm and alarm, AC power failure and Drive disengaged alarm.** **14)** Rechargeable Battery having at least 1 hours backup for about 5ml/hr flow rate with 50ml		1

		syringes. Larger battery life and indication of residual life will be preferred. **15) Mounting device/ Docking Station for at least four pumps as per requirement so as to** **enable to power up to 4 pumps with one power cord when mounted on IV pole –Twenty** **nos.** **16)** The unit shall be capable of stored and operating continuously in ambient temperature of 10 - 50deg C and relative humidity of 15-90% **17)** Power input to be 220-240VAC, 50Hz. **18)** Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out. **19)** User Manual and service manual in English. **20)** Should have local service facility. The service provider should have the necessary equipment recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual. **21)** List of important spare parts and accessories with their part number and costing.		
5	Blood gas with electrolyte analyser	A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:- pH, PCO2, PO2, Barometric pressure. Na, K, Ca, Cl. Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure. Sample volume should be approximate 100 µl for all parameters. All calibration and cleaning cycles should be fully automated with user selectable calibration items. Calibration should be performed by liquid calibration for all parameters. The electrodes provided should be zero maintenance including the reference electrode.		1

		The system should have on board data manager to store all patient results, QC data and calibrations. The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously. A power fail protection for 20 min.to take all calibration and programmed data. The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen. A built in thermal printer should be provided to print out patient results. The system should work in discrete testing, ie, selectable parameter testing. Should be supplied with consumable, reagents and QC agents for 1000 tests, as per the user requirements so that they do not expire. Should not preferably use special gases.		
6	Electrolyte Analyzer	• For analysis of Electrolytes in serum, plasma, urine, cerebrospinal fluid (CSF), hemolysate and whole blood. • System should be able to measure Na, K, Ca and should be upgradable to measure Cl (chloride) and Li (lithium) Electrodes. • System should be able to measure following parameters: Na, K, Ca and should be upgradable to measure Cl (chloride) and Li (lithium) Electrodes. • The machine should have reagent in single reagent pack for all the measurable parameters and the pack should be Bio Hazard free. • It can be used for blood/plasma/serum, urine, body fluids, dialysate, aqueous & QC Fluids • Resolution should at least in 0.1 mmol/Litre • Sample can be fed by capillary syringe or sample tube directly • Sample volume should be less than 100 micro-liters. • Analysis time should be less than 60 seconds • Calibration should be fully automatic 1 and 2 point calibration. 1 point with every sample and 2 point time bound		1

		• Quality control memory storage, of at least 3 levels • Facility of flagging of abnormal results and user programmable ranges. • Stand by mode: user controlled and automatically controlled • Memory for last 20 messages. • Built in printer for printing the data. • RS.232.C (standard serial port) should be available • ISE Analyser-01 • Na, K, Ca Electrodes- 01 ea • Li and Cl Electrodes-01 ea(OPTION) Quote price separately for these. • Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. • Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70% • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% • Power input to be 220-240VAC, 50Hz • Suitable Servo controlled Stabilizer/CVT • Resettable overcurrent breaker shall be fitted for protection • Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system. • Certified for meeting IEC 60601-1-4 Medical electrical equipment - Part 1-4: General requirements for safety - Collateral Standard: Programmable electrical medical systems • Attach original manufacturer's product catalogue and specification sheet. Photocopy/ computer print will not be accepted. All technical data to be supported with original product data sheet. Please quote page number on compliance sheet as well as on technical bid corresponding to technical specifications.		

		• Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 • Should be FDA or CE approved product • Certificate of calibration and inspection. User manual in English		
7	**Auto Blood Gas Analyzer**	A fully automated pH/Blood gas/electrolyte analyzer measuring the following parameters:- pH, PCO2, PO2, Barometric pressure. Na, K, Ca, Cl Co-oximetry: ct Hb, CCO Hb, Met Hb, Sulf Hb, Haematocrit and Barometric pressure. Sample volume should be approximate 100 µl for all parameters. All calibration and cleaning cycles should be fully automated with user selectable calibration items. Calibration should be performed by liquid calibration for all parameters. The electrodes provided should be zero maintenance including the reference electrode. The system should have on board data manager to store all patient results, QC data and calibrations. The system should have a closed waste system and monitored continuously. Also all the system reagents should be monitored continuously. A power fail protection for 20 min.to take all calibration and programmed data. The analyzer should have a colour LCD screen to access all the system software and to display the patient's results. With alphanumeric key board/touch screen. A built in thermal printer should be provided to print out patient results. The system should work in discrete testing, ie, selectable parameter testing. Should be supplied with consumable, reagents and QC agents for 1000 tests, as per the user requirements so that they do not expire. Should not preferably use special gases.		1
8	Digital infusion Pump	1. The equipment should have Roller type Peristaltic pump /Volumetric pump technology for delivery of IV fluids and blood/blood products ranging between 2.5		10

		ml to 750 ml per minute. 2. The Equipment should have high levels of safety from air embolism by integrating atleast two ultrasonic air detection sensors. 3. Heating process should be done by an electro magnetic induction heating system. 4. The Equipment should have two infra –red temperature sensors for accurate delivery of fluids at 37deg.C. 5. The equipment should have the facility to automatically purge air for removal of any outgassed air to prevent it from entering the patient line. No manual process should be involved. 6. The equipment should have operator controlled Bolus infusion key for rapid response in critical situations. 7. The equipment should have a line pressure control sensor for restriction of flow in case of line occlusion immediately and stop the delivery of fluids for patient safety. 8. The Equipment should have a recirculate mode for pre – warming of fluids during transport. 9. The Equipment should have an interactive on-board display system which displays information about the rate of infusion , total volume infused , real temperature of fluids, line pressure etc. 10. The equipment should have an internal rechargeable battery backup. 11. Consumables should be universal for all flow rates ranging between 2.5 ml to 750 ml per minute.		
9	Aponea monitor	0.20 breath / minute with alarms and sensitivity setting for neonatal & pediatric use.		1
10	Bilirubinometer (Transcutaneous Serum)	1. Method of measurement –reflectance bichromatic photometry. 2. Light source- two white light emitting diodes (LED) 3. Detector- two photocell system 4. Measuring gauge- 2-58 (in unit of TBI) 5. Optical unaccuracy- <10% 6. Imprecision (CV%)-<2% 7. Correlated between TBI and laboratory values for serum bilirubin levels- more or equal		1

		to 0.92 8. Readout- three digits liquid crystal display 9. Measuring cycle time -~2 seconds. Between the measuring cycles the device is in a stand by mode. 10. Power source- 3 batteries of AAA (or LR03) type or equivalent		

Annexure A : Specification for Supplies

Package Three : Neonatal ICU, ICU & Surgical Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Multi channel ECG machine (12-channel)	1 Description of Function ECG Machine is primary equipment to record ECG Signal in various configurations. 1.1 12 channels with interpretations are required for recording and analyzing the waveforms 2 Operational Requirements 2.1 The ECG Machine should be able to acquire all 12 Leads simultaneously 3 Technical Specifications 3.1 Should acquire simultaneous 12 lead ECG for both adult and pediatric patients 3.2 Should have Real time display of ECG waveforms with signal quality indication for each lead 3.3 Should have EMG, AC, and low and high pass frequency filters. 3.5 Should have 5.7 inch LCD display full screen 3.7 Should have alpha numeric Keyboard for patient data Entry. (Virtual or hard keys) 3.8 Should have High resolution (18 bit x 1000 Hz on 25, 50 mm/sec speed) . Paper specification - 216 mm x 20/30m, roll 3.12 Should display ECG on LCD/TFT Display. 3.13 USB Support (optional) for Storage on external portable memories. 3.14 Minimum 150 ECG Storage in USB or flash memory or any better device. 3.15 CMMR - >60dB 3.16 Frequency response – 0.05~ 150 Hz		5

		4 System Configuration Accessories, spares and consumables 4.1 ECG Machine 12 Leads with Interpretation - 01 4.2 Patient Cable - 02 4.3 Chest Electrodes Adult-(set of six) -01 set 4.4 Chest Electrodes Paediatric-(set of six) - 01 set 4.5 Limb Electrodes(set of 4)- 01 set 4.6 Thermal Paper rolls 5 Environmental factors 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% 5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. or should comply with 89/366/EEC; EMC-directive. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug 7 Standards, Safety and Training 7.1 Should be FDA/CE or BIS approved product 7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General class – 1, type CF 8 Documentation 8.1 User Manual in English 8.2 Service manual in English 8.3 List of important spare parts and accessories with their part number and costing 8.4 Certificate of calibration and inspection. 8.6 List of Equipments available for providing calibration and routine Preventive MaintenanceSupport. as per manufacturer documentation in service/technical		

		manual.		
2	Multi-parameter with capnometer	1 Description of Function 1.1 Monitor is required to monitor vital parameters of patients. 2 Operational Requirements 2.1 Monitor should be portable and lightweight and should monitor vital parameters of patients. 2.2 Capability of storage of patient data and printing of patient reports. 3 Technical Specifications 3.1 Portable and Light weight preferably < 8Kg 3.2 12 inch multi color TFT display 3.3 Monitoring parameters: - ECG, respiration, NIBP, SaO2, capnometery and temperature 3.4 Digital and 4 waves / traces display 3.5 Monitor should have audible and visual alarms capability. Alarms should have three distinct audible alarm tones to distinguish alarm levels. Also monitor should permit automatic viewing of alarming parameter waveform and numeric from any bedside in alarm as and when connected in a network. 3.6 Trends should be automatically stored for at least 160 hours in at least one-minute intervals. 3.7 Numeric monitored data trend shall be viewable and recordable in a patient chart type format in at least 1, 5, 15,and 30 minutes intervals. 3.8 Convenient handle for carrying the same 3.9 Able to fix with bed/trolley. 4 System Configuration Accessories, spares and consumables 4.1 Portable/Transport Monitor-01 4.2 Patient cables (5 lead) –01 4.3 Adult Cuff – 01 4.4 Paediatric Cuff –01 4.5 Adult Probe SPO2 –01 no. 4.6 Paediatric Probe SPO2 –01 no. 4.7 Skin Temp Probe –01 no.		4

		4.8 Dual channel recorder –01 4.9 Paper Recorder- 100 5 Environmental factors 5.1 The unit shall be capable of operating continuously in ambient temperature of 5 -40^{0}C and relative humidity of 15-85% 5.2 The unit shall be capable of being stored continuously in ambient temperature of -0-55% and relative humidity of 15-90%. 5.3 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) GeneralRequirements of Safety for Electromagnetic Compatibility. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with regular plug 6.2 minimum one hour battery back up should be supplied with the system. 6.3 battery operating time 240 minutes 7 Standards, Safety and Training 7.1 Should be FDA or CE approved product 7.2 Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particularrequirements for the safety of electrocardiographic monitoring 8 Documentation 8.1 User Manual in English 8.2 Service manual in English 8.3 List of important spare parts and accessories with their part number and costing. 8.4 Certificate of Calibration and inspection from the factory 8.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in-service / technical manual.		
3	Basic Monitor-Neonatal (Resp., Temp., Pulse, SPO2)	1 Description of Function 1.1 Monitor is required to monitor vital parameters of neonatal patients. 2 Operational Requirements 2.1 Monitor should be portable and light weight and should monitor vital		3

		parameters of patients. 2.2 Capability of storage of patient data and printing of patient reports. 2.3 Capability to integrate with the HIS and transfer the data through LAN / Wireless LAN to any other monitoring room / doctor's desk. Should be HL-7 compatible for transmitting and receiving data to/fro LAN/HIS (OPTIONAL) 3 Technical Specifications 3.1 Portable and Light weight preferably < < 8 kg 3.2 8 inch multi colour TFT display 3.3 Monitoring parameters: - ECG, respiration, NIBP, SpO2, temperature 3.4 Digital and 4 waves / traces display 3.5 Monitor should have audible and visual alarms capability. Alarms should have three distinct audible alarm tones to distinguish alarm levels. Also monitor should permit automatic viewing of alarming parameter waveform and numeric from any bedside in alarm as and when connected in a network. 3.6 Trends should be automatically stored for at least 120 hours in at least one-minute intervals. 3.7 Numeric monitored data trend shall be viewable and recordable in a patient chart type format in at least 1, 5, 15, and 30 minutes intervals. 3.8 Convenient handle for carrying the same 3.9 Able to fix with bed/trolley. 3.10 Should be upgradeable. 4 System Configuration Accessories, spares and consumables 4.1 Portable/Transport Monitor-01 4.2 Patient cables (5 lead) –01 4.3 Paediatric & Neonatal Cuff –01 4.4 Paediatric & Neonatal Probe SPO2 –01 no. 4.5 Skin Temp Probe –01 no. 4.6 Dual channel recorder –01 4.7 Paper Recorder- 100 5 Environmental factors 5.1 The unit shall be capable of operating continuously in ambient temperature of 5 -40^{0}C and relative humidity of 15-85%		

		5.2 The unit shall be capable of being stored continuously in ambient temperature of -0-55% and relative humidity of 15-90%. 5.3 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) GeneralRequirements of Safety for Electromagnetic Compatibility. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with regular plug 6.2 minimum one hour battery back up should be supplied with the system. 6.3 battery operating time 300 minutes 7 Standards, Safety and Training 7.1 Should be FDA or CE approved product 7.2 Shall meet the safety requirements as per IEC 60601-2-27:1994—Medical electrical equipment—Part 2: Particular requirements for the safety of electrocardiographic monitoring 8 Documentation 8.1 User Manual in English 8.2 Service manual in English 8.3 List of important spare parts and accessories with their part number and costing. 8.4 Certificate of Calibration and inspection from the factory 8.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in-service / technical manual.		
4	Pulse Oximeter	1 **Description of Function** 1.1 A pulse oximeter is a medical device that indirectly measures the amount of oxygen in patient's blood (as opposed to measuring oxygen saturation directly through a blood sample) and changes in blood volume in the skin, producing a photoplethysmograph. 2. **Operational Requirements** 2.1 Suitable for all types of patient range: Adult, pediatric, infant, and / or neonate.		3

		3. **Technical Specifications** 3.1 Display – LCD, Backlight illuminated. 3.2 Parameters and waveform displayed – SpO_2, pulse rate, system status, plethysmogram, menus for user settings. 3.3 SPO_2 range – 70-100% 3.4 Accuracy of SPO_2 -3% 3.5 Pulse rate range should be 30-240 bpm 3.6 Audiovisual Alarms- high/low SpO_2 and pulse rate, sensor off, sensor failure, low battery. 3.7 Alarm override facility. 3.8 Cable length should be minimum 1 metre. 3.9 RS 232C Interface for datacommunication 3.10 Integrated Printer 3.11 Battery back-up operating time 5 hours. 4. **System Configuration Accessories, spares and consumables** 4.1 System as specified 4.2 SpO_2 sensor with cable – two nos per monitor and paediatric SpO_2 sensors – one no. per monitor, Neonatal Sensor – 01 5. **Environmental Factors** 5.1 Shall meet IEC-60601-1-2:2001 (Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive. 5.2 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%. 6. **Power Supply** 6.1 Should work on 220-240 VAC as well as rechargeable batteries. Main adaptor to be supplied. 6.2 Rechargeable battery operated system. Charger to be provided if integrated charger is not there.		

		7. **Standards, Safety and Training** 7.1 Should be FDA, CE, UL or BIS approved product. 7.2 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements. **8 Documentation** . 8.1 User/Technical/Maintenance manuals to be supplied in English 8.2 Certificate of calibration and inspection. 8.3 List of important spare parts and accessories with their part number and costing.		
5	Oxygen Concentrator (Portable)	Oxygen concentrator is a device that generates oxygen with a purity of 90 -92% ± 3 by using the environment air that comprehends in the ratio of 21% Should have following parameters 1. Oxygen flow rate – 1~ 5 l/min 2. Oxygen concentration – 90%~92% 3. Max. outlet pressure – 8 PSI 4. Operating temperature range – 10 ^{0}C~ 40 ^{0}C 5. Operating Humidity range – 10~ 90% HR 6. Weight < 20 Kg		1
6	Bronchoscope (Rigid) with Accessories with Light Source	1. **Description of Function** 1.1 A rigid bronchoscope is a straight, hollow, metal tube inserted to examine inside a patient's airway for abnormalities such as foreign bodies, bleeding, tumors, or inflammation. 2. **Operational Requirements** 2.1 Should be sturdy system complete with light source and all accessories. 3. **Technical Specifications** 3.1. Bronchoscope tube for use in adult in various standard sizes- approx 6.5, 7.5 & 8.5 and standard length (approx 42 cm).		1

		Should have the following accessories: a. Glass window plug b. Rubber window plug c. Sliding adapter for sealing cap and lens d. Injection cannula for positive pressure assisted ventilation system. e. Instrument guide for aspiration catheter and pressure tamponade. f. Magnifier lens system g. Adapter to respirator with sealing plug. h. Prismatic light defector with adapter for fiberoptic light cable. 4. **System Configuration Accessories, spares and consumables** Fiberoptic light cable Halogen cold light source: 12 volt 50 watt, 15 volt, 150 watt Telescope compatible with unit. a. Forward viewing straight – 0 Degree b. Foreign body holding forceps -30 Degree c. Lateral – 70 2. Biopsy Forceps of a. alligator type and fenestrated b. Foreign body holding forceps c. Dormia basket 3. Constant Voltage stabilizer 5. **Environmental Factors** 5.1 Shall meet IEC-60601-1-2: 2001 (Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility or should comply with 89/366/EEC; EMC-directive.		

		5.2 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90% 5.3 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90% 6. **Power Supply** 6.1 Power input to be 220-240 VAC, 50Hz fitted with Indian plug 6.2 UPS of suitable rating with voltage regulation and spike protection for 60 minutes back up . 7. **Standards, Safety and Training** 7.1 Should be FDA, CE, UL or BIS approved product. 7.2 Comprehensive training for lab staff and support services till familiarity with the system. 7.3 Shall be certified to be meeting safety standard IEC 60601-2-18 part 2 particular requirements for the safety of endoscopic equipment. 8. **Documentation** 8.1 User / Technical/ Maintenance manuals to be supplied in English. 8.2 List of important spares and accessories with their part number and costing. 8.3 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page / para numer or original catalogue / data sheet. Any point, if not substantiated with authenticated catalogue / manual, will not be considered. 8.4 Certificate of calibration and inspection. 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance check list. The job description of the hospital technician and company service engineer should be clearly spelt out. 8.6 List of Equipments available for providing calibration and routine Preventive Maintenance Support, as per manufacturer documentation in service / technical manual.		

7	Ultrasonic Nebulizer	1. **Description** 1.1 Nebulizer is a device used to administer medication to people in forms of a liquid mist to the airways. It is commonly used in treating cystic fibrosis, asthma, and other respiratory diseases. 2. **Operational Requirements** 2.1 Heavy duty compact Nebulizer is required. 3. **Technical Specifications** 3.1 Technical Specifications Nebulizer 1. Compact, light weight, low noise. 2. Durable long life compressor. Suitable for heavy duty/ institutional (hospital) use, should be able to run uninterruptedly for one hour 3. Power: maximum 40W 4. Crystal Operating Frequency -1.68 MHz 4. Should produce particle of size 0.5-6µm 5. Average nebulization rate : up to 0.5 ml/min 6. 24 hours continuous work for hospital use. 7. Oil less and maintenance free piston pump 8. Maximum Vacuum adjustable -85kPa/640mmHg 9. Weight <4 Kg 4. **System Configuration Accessories, spares and consumables** a). Vapor Tubing -01 no b). Medicine cup-01 no. c). Adult Mask-01 no. d). Paediatric Mask-01 no. 5. **Documentation** 5.1 User/Technical/Maintenance manuals to be supplied in English. 5.2 List of important spare parts and accessories with their part number and costing. 5.3 List of Equipments available for providing calibration and routine Preventive		5

		Maintenance Support, as per manufacturer documentation in service/technical manual. 5.4 Certificate of calibration and inspection.		
8	Suction Machine	**1. Description of Function** To extract fluid from the body during surgery or emergency treatment 2. **Operational Requirements** Shall have high vacuum suction capacity The machine should be portable on castors/mobile trolley 3. **Technical Specifications** Heavy duty and noiseless with piston/cylinder technology. Auto cut-off for preventing entry of fluid in pump To facilitate maintenance the cover of machine should be easy toopen from the top & sides. The suction machine should be capable of producing vacuum up to -90K Pascal, which should be adjustable and monitored by vacuum gauge of suitable range. The suction capacity should be 15 litres or more per minute and can be regulated. It should have two bottle of 4-5 liters capacity with synthetic rubber lids. The bottle shall be fitted with the arrangement to prevent overflow of fluid. ON/OFF Switch and Power indicator. Body material: Base, top & Panel made of rust proof and corrosion resistant moulded ABS; Jar/Bottle material; Autoclavable polycarbonate. Optional inbuilt maintenance free battery. Battery backup upto 60 minutes on full charge. 4. **System Configuration Accessories, spares and consumables** System as specified 3 core lead of 2 meter along with one 3 pins 15 amp. Plug -01 Power cable -3 crore lead of 5 meter along with one 3 pins 15 amp. Plug -01		6

		The following spares machine are also required:- Bottles 2 Nos. Lids 2 Nos. Rubber Seals 2 Nos. Blades 2 Nos. Suction tubing set 1 No. 5. **Environmental Factors** The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90% The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%. 6. **Power Supply** Power input to be 220-240 VAC, 50Hz fitted with regular plug A fuse or a resettable circuit breaker f a appropriate capacity should be incorporated for protection of motor. Should work on 220-240V AC 7. **Standards & Safety** Should be FDA, CE, UL or BIS approved product. Electrical safety conforms to standards for electrical safety IEC 60601-1 General Requirements (or equivalent BIS Standards). Shall meet internationally recognized standard for Electro Magnetic Compatibility (EMC) for electromedical equipment: IEC-60601-1-2: latest edition or equivalent BIS) or should comply with 89/366/EEC; EMC-directive as amended.		

		8. **Training** Comprehensive training for staff of user department and support services till famillarity with the system.		
9	Ventilator (Infant Paediatrics & Adult)	**1 Description of Function** 1.1) Ventilators to provide artificial respiratory support to Infant Paediatric and Adult patients. **2 Operational Requirements** 2.1) Microprocessor Controlled ventilator with integrated facility for Ventilation monitoring suitable for new born to adult ventilation. **(3) Technical Specifications** **(3.1) Standard hinged arm holder for holding the circuit** **(3.2) Colored TFT screen, 12 Inch or more YES- 15 inch** **(3.3) Facility to measure and display Yes** a) 3 waves- Pressure and Time, Volume and Time and Flow and Time. b) 2 loops- P-V and F-V d) Status indicator for Ventilator mode, Battery life, patient data, alarm settings, clock etc **(3.4) Trending facility for 24hours with minimum 5 minutes resolution for recent 24 hours** **(3.5) Automatic compliance & Leakage compensation for circuit and ET tube** **(3.6) Following settings for all age groups.** a) Tidal Volume b) Pressure (insp) c) Pressure Ramp/Slope d) Respiratory Rate e) SIMV Respiratory Rate f) CPAP/PEEP g) Pressure support h) FIO2		7

		i) Pause Time j) Pressure & Flow Trigger **(3.7) Monitoring of the following parameters** a) Airway Pressure (Peak & Mean) b) Tidal volume (Inspired & Expired) c) Minute volume (Inspired and Expired) d) Spontaneous Minute Volume e) Total Frequency f) FIO2 g) Total PEEP h) Plateau Pressure i) Resistance & Compliance j) Use selector Alarms for all measured & monitored parameters. K) Rapid Shallow breathing index **3.8 Modes of ventilation** a) Volume controlled b) Pressure Controlled c) Pressure Support d) SIMV (Pressure Control and volume control) with pressure support e) CPAP/PEEP f) Inverse Ratio Ventilation g) Volume Target Pressure Control h) Non Invasive ventilator for all modes with automatic leak compensation i) APRV/BPRV j) ACMV MODE k). Spontaneous **3.9 backup ventilation** **3.10 Expiratory block should be autoclavable and no routine calibration required**		

		3.11 Should have the ability to calculate / Procedure a. Auto Peep & Auto PEEP Volume b. Occlusion Pressure P_{01} c. Spontaneous Breathing trial (NIF/ MIF/NIP/MIP) d. Facility to calculate lower and upper inflection point using a PV maneuver **3.16 Battery back up for minimum 1 hour.** **3.17 RS 232C interface for communications with networked devices.** **<u>4 System Configuration Accessories, spares and consumables</u>** 4.1 Ventilator – 01 4.2 Adult, Paediatric and Neonate/Infant autoclavable silicone breathing circuits – 02 each 4.3 Adult, Pediatric & Neonatal/Infant Test lung – 1 each 4.4 Heater Wire (Adult, Paediatric and Neonate/Infant) – 06(02from each) 4.5 Humidifier Chamber: Adult & Paediatric/Infant – 01 each 4.6 Temperature Probe - 01 4.7 (a) Reusable Masks (Small, Medium, Large) with each machine. - 02 sets each <u>5 Environmental factors</u> 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90%		
10	Adult Therapeutic UGI Video Endoscope System	Adult Therapeutic UGI Video endoscope Biopsy channel rubber valves (50 pieces with one endoscope) Scope should be fully immiscible for disinfection. Large tray should be provided for disinfection of equipment		1
		Details regarding the Adult Therapeutic UGI Video endoscope		
		✓ **<u>Optical System</u>** Field of View: 140 degree or more Depth of View: 2- 100 mm or better		

		HD, CCD: High resolution Color chip of latest technology ✓ **Distal End (OD): 9.5 mm or less** ✓ **Bending section (Range of distal end bending)** Up: 210 degree or more Down: 90degree or more Right: 100degree or more Left: 100degree or more ✓ **Insertion tube (OD): 9.5 mm or less** ✓ **Working Length: 1000-1150 mm** ✓ **Total length: 1300-1450 mm** ✓ **Instrument Channel (ID): 2.8 mm or more** **Specifications for Adult Video Colonoscope System** Adult therapeutic LGI Video Colonoscope, HD Biopsy channel rubber valves (50 pieces with one endoscope) Scope should be fully immiscible for disinfection **Other inclusions:** All standard accessories, Air Leakage Tester, User/Operator & Reference Manu Large trey should be fully immiscible for disinfection. **Details regarding the Adult Video Colonoscope** ✓ **Optical System** Field of View: 140 degree or more Depth of View: 2- 100 mm or better HD, CCD High resolution Color chip of latest technology ✓ **Distal End (OD): 12 mm or less** ✓ **Bending section (Range of distal end bending)** Up: 180 degree or more Down: 180 degree or more Right: 160 degree or more		

		Left: 160 degree or more ✓ **Insertion tube (OD): 12 mm or less** ✓ **Working Length: 1600-1800 mm** ✓ **Total length: 1900-2100 mm** ✓ **Instrument Channel (ID): 3.8 mm or more** **Specifications for Adult Therapeutic Video duodenoscope System** **To include:** Adult Therapeutic Video duodenoscope (ERCP scope) Biopsy channel rubber valves (50 pieces with one set) Scope should be fully immiscible for disinfection **Other inclusions:** All standard accessories, Air Leakage Tester, User/Operator & Reference Manu Large tray should be fully immiscibl for disinfection Details regarding the adult therapeutic video dupdenoscope (ERCP scope) ✓ **Optical System** Field of View: 100-140 degree or more Angle of view: 5-7 degree or more CCD: High resolution Color chip of latest technology ✓ **Distal End (OD): 12-13.5 mm or less** ✓ **Bending section (Range of distal end bending)** Up: 130 degree or more Down: 90 degree or more Right: 105 degree or more Left: 90 degree or more ✓ **Insertion tube (OD): 11- 12 mm or less**		

		✓ **Working Length: 1200-1260 mm** ✓ **Total length: 1500-1560 mm** ✓ **Instrument Channel (ID): 4.2 mm or more** **Equipment common for above Video Endoscopes include:** Compatible HD Video Processor (separate) Compatible HD supported Xenon Light Source with 2 Xenon bulbs, 300 W (Sep Compatible 24 LCD Monitor Portable high quality Trolley for the whole system (Original) All standard accessories, Air Leakage Tester, User/Operator & Reference Manu A fully loaded Windows Xp/Vista based PC for storage of endoscopic image Printing on demand 500 GB hard disk, 2 GB RAM, DVD/CD read & w capabilities, Digital keyboard and optical mouse, 17-19" LCD monitor U standard make and model & colored laser printer, preferably with smart memo card slot or digital output to facilitate direct recording of data, image and video from the processors. (Online Technical Support) Unit should be supplied with all genuine software like windows Xp/windows 8, 2010/2012, software for recording processing and printing etc. Separate trolley for installation of computer		
11	Laparoscopic Cholecystectomy Set	**Laparoscopic Cholecystectomy Set** High Definition Three Chip Camera System 1. Camera console 220 v with universal coupler & Autoclavable camera head 2. Pure Digital signal with high definition video (1280*1024 native resolution) 3. Resolution-2000 horizontal lines 4. 8 specialty settings 5. Integrated Flexible Scope filter 6. Signal to Noise ratio-70 db 7. Progressive scan technology both on camera head & console 8. Brightness Control on console & camera head 9. Aperture Control on console 10. Inbuilt 16 step digital Image Enhancer on console		1

		11. Digital zoom & white balance on camera head 12. Integrated Gain/shutter/Enhancement with brightness control 13. Two peripheral control on camera head **Video Output** 1). 2 DVI output 2). 2 SVHS & 1 RGB out put 3). One Composite out put **Automatic Light source** 1. 220 V,300 W. Xenon Bulb(with one spare bulb) 2. Elliptical Bulb technology 3. Bulb Working life 5800hrs 4. Digital Bulb life counter on light source 5. Automatic /Manual Light Adjustment 6. Standby Mode 7. Universal Jaw Assembly to adapt any make of fiber optic cable without adapter. 8. Fiber optic Cable 6.5mm*7.5 feet Snap Fit cable 9. Medical Grade Monitor19" Flat Panel Monitor Colour Insufflator 40 liter of high flow. Microprocessor controlled unit. Soft approach Pressure control for safe recovery of abdominal pressure. Gas heating LCD based central display monitor with multilingual text & graphics. AV warning signal. Laparoscopes, Fully Autoclavable with working length 300mm Wide angled distortion free view, HD Universal adaptor for other light sources Yellow Glass index for optimum evenness of focus & contrast 0 degree, 10mm, HD 30 degree, 10 mm 0 degree , 5mm, HD **Specifications**		

		Laparoscopic hand instruments (reusable) with 310mm working length, take apart locking / unlocking mechanism, rotatable with interchangeable handle with monoplar diathermy attachment (Except trocars and veress needle) Veress needle 12 cm length- 4 Nos. Veress needle 15 cm length-4 Nos. Carbon-di-oxide gas tubing-4 Nos. Trocars sleeves 10 mm-4 Nos. Reducer 10/5 mm-2 Nos. Trocars sleeves 5.5 mm 4 Nos. Trocars (pyramidal tip) 10 mm 4 Nos. Trocars (pyramidal tip) 5 mm 4 Nos. Trocars washer 5 mm 100 Nos. Trocars washer mm 50 Nos. Laproscopic biopsy forceps 5 mm, 2 Nos. Maryland dissector 5mm with unipolar diathermy 2Nos. Maryland dissector 5mm, high performance with bipolar Cutting 2 Nos. Atraumatic graspers, 5mm 2 Nos. Metzenbaum scissors (5cm) with unipolar diathermy 2 Nos. Metzenbaum scissors (5cm) high performance with bipolar Cutting 2 Nos. Fan retractors 5 mm 2 Nos. Laparoscopic cautery leads 4 Nos. Suction irrigation device with two way valve 2 Nos. L shaped hook electrode 5mm L shaped hook 5mm , high performance with bipolar cutting 2 Nos. Laparoscopic bowel grasper 5mm, length 33-36 cm-2 Nos. Laparoscopic spoon forceps 10mm length 33- 36 cm -2 Nos. Needle holder 5mm, 33 cm long 4 Nos. Laparoscopic suction cannula, 10 mm-2 Nos. Laparoscopic suction cannula 5 mm-2 Nos. Clip applicator 10 mm Large, Medium, Small Clips Gall bladder extraction 5mm Large, Medium, Small Clips Hassan cannula take off Lap-Eondotrainer		

		Port closure needle Sterilization tray with cover 3 x 1		
12	Set of General Orthopedic Instruments	**Set of General Orthopedic Instruments** • Langenback Retractors - i. Mini Langenback Retractor 10mm x 6mm 1each ii. Mini Langenback Retractor 22mm x 8mm iii. Kocher Langenback Retractor 40 x 11mm x 21cm iv. Langenback Retractor 30 x 11 • **Hohmann's Retractors** i. 8mm Blade 1each ii. 10mm Blade iii. 17mm Blade iv. 43mm Blade **v.** 13/25 mm Blade • BP Knife handles No. 3 size -2 No. 4 size -2 No.7 size -2 • Bone levers Small size -2 Medium size- 2 • Hammer i. Collin Mallet -2 ii. Nylon Faced Hammer 20 Nos.-2 • Bone holding reduction forceps with locking device Small for forearm bones -2		1

		Large for leg bones -2 • Bone Holding Forceps Lane's – small, Medium, large size one each -1set • Bone forceps with wire passer (two blunt blades with hole for passing K wire to fix phalanx fractures) -4 • Wire holding forceps - 2 • Wore holding pilers Small -2 Large -2 • Wire bending pliers – 2 each of blunt tip and sharp tip- one all • Bending Iron for 3.5 mm plates -5 • Bending Irons for 4.5 mm plates- 5 • K Wire traction set complete a) Each set should contain i. Kirschner stirrup for wire extension -5 Nos. ii. K-wire double ended 200mm -10Nos. b) Each set should contain i. Gissane stirrup for wire extension -2Nos. ii. K-wire double ended 200mm -5Nos. • Bohlers stirrups of assorted size- 10 • Backhaus towel forceps - 16 • Skin Hooks Gillies for size 1 & 3-2 each -1set • Bone curette i. Volkman all size -1each ii. Maartini curettes all size -1each		

		A.O. type damaged screw removal set -2 • Small fragment plating instruments with implant set complete-2sets Should consist of the following: i. Small fragment instrument set (3.5mm) in autoclavable box -1No. ii. Small screw box Contain the following: 10mm 5 units 12mm 5 units 14mm to 40mm 8 unit each Cancellous screws 4mm 10mm to 50 mm 2 unit each Screw holding forceps 1 Storage and sterilization Case with tray. 1 No. iii. Box containing small plates DC plates small 4 hole 4 No. DC plates small 5 hold 8 No DC plates small 6 hole 12 No DC plates small 7 hole 8 No DC plates small 8 hole 5 No. Storage and sterilization Box 1 No. • Femoral Nail Extractor Set • Long handled bone curette Non serrated edge -2 Serrated edge -2 • Gigli Saw Instrument Set Each set should contain i. Gigli saw handle 1 pair-2 ii Gigle saw wires 100 Nos.		

		• Patella reduction clamp- 2 • Patella wire paser - 2 • Ring cutter - 4 • K-wire cutter (capacity 4mm) with replaceable -2set Tungsten carbide blades with rubber jaws set Should consist of : i. K-wire cutter 28mm ii. Spare blades 4 pairs with screws iii. Spare rubber jaws 4 pairs with screws iv. Allen keys 4 nos. • Stienmann pin cutter cutting capacity up to 6mm -10 • Bone curette double ended round / oval i. small 13 cm -1 ii. Medium 16 cm -1 ii. Large 20 cm -1 • Loute wire tightener cum wire cutter -1 • Wire bending cum cutter plier length 15 cm -1 • Osteotomes Smith pattern i. Straight 3/8, ¾ -2 ii. Curved 3/8, ¾ -2 • Gouzes ST Thomas ¼", 3/8", ¾" -1each • Chisel straight with tufnol handle 2 of each size 7,10,15,20mm- 1each • Retractors i. Wullstein-weitlaner self-retaining retractor -2 3x3 teeth blunt length 13 cm ii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 16.5cm. -2		

		iii. Weitlaner self –retaining retractor 3x4 teeth blunt Length 26 cm -2 iv. Adson self-retaining retractor 3x4 teeth blunt Length 26 cm-2 v. Gelpi self retaining retractor with balls, blunt 2 length 18 cm. • Elevators Farabeuf periosteal elevator, straight 13mm, length 15 cm -1 Farabeuf periosteal elevator, straight 13mm, length 15 cm -1 • Jacobs Chuck with handle Jacobs drill three jaw chuck with key, mix, Dia 6.35mm length 14 cm -5 • Screw driver 3.5mm screw- 2 • Screw driver 4.5mm screw -2 • Artery Forceps i. Mosquito Forceps 5” -12 ii. Spencer well Forceps 5” -12 • Forceps 6” - 12 i. Plain forceps 6” -2 ii Toothed 6”. -2 • Bone cutting forcep i. Liston straight 7” -1 ii. Liston double action 10 ½” -1 • Sponge holding forceps 25 cm- 4 • Tissue forceps (Kockers)		

		i. 5" -2 ii. 8" -2 Lane forceps i. 5" -2 ii. 7 ½" -2 Allis 6" and 7 ½" Scissor MAYO' straight 6" -2 • Scissor dissecting 7" - 2		
13	Hysteroscope Set with Resectoscope	1 Description of Function 1.1 The resectoscope is a hysteroscope with a built in wire loop (orother shape device) that uses high-frequency electrical currentto cut or coagulate tissue. It allows surgery inside the uterus an organ without having to make an incision. Hysteroscopy uses a hysteroscope, which is a thin telescope thatis inserted through the cervix into the uterus for examination. 2 Operational Requirements 2.1 Complete unit with Resectoscope and Hysteroscope is required 3 Technical Specifications 3.1A)Hysteroscope Telescope with color code: 4 mm diameter with aworking length of at least 30 cms; 30 degree fore oblique lens, autoclavable or sterilized by liquid disinfectant; Fiberoptic light transmission incorporated, B)Diagnostic Sheath with obturator 5mm diameter for the above 4mm Hysteroscope telescopes (item A), with leur lock adapter. C)Continuous irrigation Operative Hysteroscope Sheath with obturator, outer and		1

		inner sheath for the above 4 mm hysteroscopetelescope (item A) with channel for semi-rigid 5/8 fr size instruments. Should have facility for self closing sealing system for precise irrigation. D)Accessories Hysteroscopy flexible / semi rigid instruments which should beadaptable to above sheath (item C), 5/8 fr. Diameter- 1) Foreign body grasping forceps . 2) Scissors 3) Biopsy and Grasping forceps . 4) Needle electrode and ball electode-Unipolar – high frequency cords of anymake should be compatible with the above equipment 5) Bipolar vaporizing electrode – high frequency cords of any make should becompatible with the above equipment 6) Myoma fixation screw 7) Palpation probe 8) Polypectomy loop Any of the above accessories may be quoted separately as optional. E) Resectoscope including connecting tube for inflow and outflow forthe above 4 mm hysteroscope telescope (item A)complete withcontinuous irrigation double sheath system, i.e outer flow and rotatinginner tube with ceramic insulation distal tip,with obturator to bequoted along with working element and complete set of electrodesand 2 set of HF cables. Size of resectoscope as per requirement. All electrodes and Collin's knife to be bipolar/unipolar (as perrequirement) to be quoted with appropriate cautery. F) Hysteromet – Suction and irrigation system for use in hysteroscopyIrrigation function is performed by electric pumpMaximum parameters for hysteroscopy are automatically set Precise presetting of volume and pressure of suction and irrigationparameters via touch keys.		

		Adjacent display scales for set values and actual value to ensure safemonitoring. To be used with pressure regulated from 0 to 200mm of Hg, and flowrate regulated from 0- 500ml/min. Suction regulated to 0 to -50kPa. Power supply 100-240 VAC, 50/60 Hz, Mains cord. Connecting cable 100 cm, one pedal foot switch. hysteroscopic tubing set. Suction and irrigation tube, antireflex surface with two way stop cockfor single hand control. Suction bottle 1.5 l and 5 l, sterizable with bottle stand and bottlestand holder. Silicon Tubing Set for suction , sterizable. 3.2 Endoscopic camera with T.V. medical grade monitor and printer A.1)Endoscopic Camera (Digital) 1. 3 chip CCD camera for capture and processing three primary colors 2. Digital image processing and digital contrast enhancement.Multiple settings which allow the user to select the desired level ofimage enhancement. Horizontal image resolution of > 750lines 3. Light weight camera head with programmable function keys 4. Camera head should incorporate zoom lensing system to produceoptimum image sizing for all scopes to alleviate the need to refocuson magnification. 5. PAL system/ multimedia as existing in this country 6. Automatic white balancing 7. Minimum sensitivity should be 3 Lux 8. Freely programmable camera head buttons 9. Cable should have buckling protection 10. Facilities for fine focus for smooth function. Microprocessorcontrolled. 11. Built in antifogging device. 12. Camera head should be compatible with telescope of any makeand light of any make. Coupling device for use with all rigid or flexibleendoscopes with standard eyepiece 13. Integrated universal power supply 14. Compatible with medical grade monitor with multimediaprojection available in this country. 15. Should have specific built in facility for camera functionalityautomatically		

		optimizing all settings. 16. Signal to noise ratio 60 db 17. Camera should be ready to use as soon as it is connected tocamera control unit. B.1) Camera Control Unit 1. Should have microprocessor control 2. Should have multiple video input and out puts – BNC,RGB,Y/C etc 3. Should have all necessary connecting cables between camera headand video monitor C.1)MONITOR –1- Multinorm/PAL system color monitor for differentcolor systems existing in the country. 2-Compatible with endovision camera of any make 3-Screen size diagonal 23" , Flat screen LCD monitor 4-Max horizontal screen resolution in lines >800 lines. 5-Monitor menu displays all controls, capabilities and operations viacurser keys, user defined captions, easy to use and highly dependable. 6-Should be composite, have multiple video input and out puts – BNC,RGB,Y/C, SDI, and preferably DVI etc 7-Power supply of 200-240 VAC. 50Hz 8-Should have facilities for recording the data on computer /digital Video recorders/CD 9-On screen menu for monitor setting , Compact and light weight,Drip water protected dust proof , all connecting cables to be supplied 10 Brightness 400cd/m2, contrast ratio 700:1 11. Antireflection coated front glass. 12 Should have consistent illumination level. 13 Should preferably have facility for upgradation and should becompatible with lower models. F) VIDEO COLOUR PRINTER :- 1-For endovision camera and multi colour systems existing in country 2-Large colour prints of video images with outstanding quality at least		

		4 different images can be stored and printed on one sheet. 3-Memories of at least 4 frame. Should be compatible with anymonitor and should be supplied with all connecting cables, satisfyinginternational quality controls, safety norms and power supply. Should preferably have facility for upgradation and should becompatible with lower models. 3.3 Xenon light source 1-300 watts bulb minimum 1000 hrs. with at least one spare bulb of15V 300 watts 2- Fully automatic with light intensity continuously adjustable from 0-100% automatically by the cameras video output signal 3- Should have display of lamp service life. 4- Stand by mode 5- Monitoring of lamp function. 6- Built in antifog air pump. 7- Universal jaw assembly to adapt cable of any make. 8- Light wt.<10 kg.>9-Certified for international /national safety standardnorms+power supply 10- Power supply 220-240 VAC 50/60 Hz. 11- Should be quoted along with spare lamp 12. Fibreoptic light cable 4.8mm in diameter and 230 -300cms inlength compatible with cold light source and commonly availabletelescopes (Necessary adaptors may be provided). 3.4 Electrocautery: 1• Should have unipolar cutting and coagulation as well as bipolarcutting and coagulation modes and have the facility of blendingcutting and coagulation in different ratios and degree –soft, standardand/ or forced coagulation and spray coagulation. 2• Arc controlled cutting with a pre selectable power of maximum of200 watts in both unipolar and bipolar modes. 3• Arc controlled coagulation with a pre selectable power of maximumof 120 watts in both unipolar and bipolar modes. 4• Auto stop function with automatic power – off on completion ofcoagulation process.		

		5• Automatic start function for bi- polar coagulation. Should beoperable both in hand and foot mode and should have hand controlswitch on the handle of the electrode. Bipolar application withirrigation with sodium chloride. 6• Endoscopy mode with reduced voltage out put for use with fineendoscopic electrodes.(microfunction) 7• It should have automatic read out panel to display current beingused and actual output at distal tip of electrode, simple operation dueto clearly arranged control with easy to read symbols. 8• Should be compatible with under water operative procedures 9• It should have neural electrode monitoring through a patientcontact system. 10• It should have automatic high frequency power cut off byautocoagulation stop and autostart facility 11• The unit should have the facility of self testing for troubleshooting. 12• Visual and acoustic signs of HF activation by different coloredindicators and different acoustic tones for cutting and coagulating. 13• Unit should have safety monitoring circuit in event of malfunctionfor output monitoring. Neutral electrode connection. Automatic selftest and automatic power cutoff in event of malfunction. Groundleakage current(LF/HF) HF application time. 14. Power supply 230VAC, 50/60 Hz. 15• The unit should be supplied with all standard accessories such asElectrode,Foot switch, Twin earth pad , bipolar forceps with Cord, Electrode Handle with switches , neutral plate, ball electrodes, Loop electrodes, variable output power for all types of currents. 4 System Configuration Accessories, spares and consumables 4.1 All consumables required for installation and standardization of system to be given free of cost. 5 Environmental factors 5.1 Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.or shouldcomply with 89/366/EEC; EMC-directive. 5.2 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C and relative humidity of 15-90%.		

		5.3 The unit shall be capable of being stored continuously in ambient temperature of 0-50deg C and relative humidity of 15-90%. 6 Power Supply 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian\ plug 6.2 UPS of suitable rating with voltage regulation and spike protection for60 minutes back up. 7 Standards, Safety and Training 7.1 Should be FDA/ CE or BIS approved product 7.2 Comprehensive training for lab staff and support services till familiarity with the system. 7.3 Shall be certified to be meeting safety standard IEC 60601-2-18part 2 Particular requirements for the safety of endoscopic equipment. 8 Documentation 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 List of important spare parts and accessories with their part numberand costing. 8.3 Compliance Report to be submitted in a tabulated and point wisemanner clearly mentioning the page/para number of originalcatalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered. 8.4 Certificate of calibration and inspection. 8.5 List of Equipments available for providing calibration and routine Preventive Maintenance Support. as per manufacturer documentation in service/technical manual. 8.6 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.		
14	Diathermy/Electrosurgical Unit	1 Description of Function 1.1 Electro-surgical units are required to provide cutting and coagulation electrically during surgery.		6

		2 Operational Requirements 2.1 A user friendly, Microcontroller-based multi-programmable by the user, isolated Electro surgicalgenerator, designed for all surgical procedure and with Spray mode for Surgery and essentialfacility of Vessel Sealing system (Comprehensive unit). 3 Technical Specifications 3.1 Ensure controlled, precise desiccation with less destruction of peripheral tissue 3.2 Permits two surgeons to operate from a single unit & accessories are activated only when keyed, should not get activated inadvertently 3.3 Low voltage coagulation 3.4 Must have three types of cut modes-Low, Pure& Blend 3.5 Must have four coagulation mode 3.6 Maximum output: 350-520 kHz sinusoid 300 watts. 3.7 Power efficiency rating more than 96 3.8 Modes: Both Bipolar (minimum 1 port) and Mono-polar (minimum 2 ports), Mono-polar shouldhave cutting, spray, desiccation and fulguration modes. Each monopolar should have separateoutput setting. 3.9 Under water facility is essential. Convection cooling system 4 System Configuration Accessories, spares and consumables (unit rate to be quoted for individual items) 4.1 Main Unit -01 No 4.2 Pencil Holder -01 No 4.3 Electrode Blades -10 Nos 4.4 Electrode Needle Fine -10 Nos 4.5 Electrode – Ball point – (3 different sizes- small, Medium & long) – 5 each 4.6 Pencil Switches with hand control -10 Nos disposable, 2 Nos reusable 4.7 2 Foot Control paddle 4.8 chuck handles - 10 Nos disposable, 2 Nos reusable 4.9 Reusable Patient plate with cable – 5 Nos. Disposable patient plate with		

		cable – 100Nos. 4.10 Mobile trolley/cart on castors with brakes -01 Nos 4.11 Power cord of 5 meters length and plug with appropriate rating for standard Indian electrical sockets. -01 No 4.12 Vessel sealing Clamps for both open and Endoscopic surgical procedures – 4 Nos each (Priceshould be quoted separately) 5 Environmental factors 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C andrelative humidity of 15-90% 5.3 Shall meet IEC-60601-1-2:2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. 6 Power Supply 6.1 Power input to be 180-270 V AC, 50 Hz as appropriate fitted with Indian plug 6.2 Resettable over current breaker shall be fitted for protection 7 Standards, Safety and Training 7.1 Patient system should be guaranteed by Return Electrode Contact Quality Monitor System which should automatically switch off the unit together with audiovisual alarms in case of power supply disconnection of the plate in the event of wire break off or loose connection. If the plate is not installed underneath the patient or it has a crack in the system it should not work. 7.2 The supplier should be CE / US FDA marked for quality standards. 7.3 Electrical safety conforms to standards for electrical safety IEC-60601-1 General Requirements 7.4 Certified to be compliant with IEC 60601-2-2 Medical Electrical Equipment		

		Part 2-2: Particular requirements for the safety of High Frequency Surgical Equipments. 8 Documentation 8.1 User Manual in English 8.2 Service manual in English 8.3 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out. 8.4 Certificate of calibration and inspection from factory. 8.5 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/ Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered. 8.6 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual. 8.7 List of important spare parts and accessories with their part number and costing.		
15	Bronchoscope Fiber-optic with Accessories	1 Description of Function 1.1 Bronchoscope is a procedure in which a hollow, flexible tube called a bronchoscope is inserted into the airways through the nose or mouth, to provide a view of the tracheobronchial tree. AVideo Bronchoscope has a video output for images to be displayed on a TV Monitor. 2 Operational Requirements 2.1 • Compatible with Laser (YAG/ Diode). • Compatible with Electrosurgical accessories. 2.2• Light weight & fully immersible in disinfection solution. 2.3 The system should meet all the numerical values given in the technical specifications within a tolerance of +/- 10 %. 3 Technical Specifications 3.1 VIDEO BRONCHOSCOPE (THERAPEUTIC) ADULT		1

		1. Latest colour CCD chip technology. 2. Compatible Xenon light source with backup Halogen source. 3. Compatible RGB Colour monitor (at least 14"). 4. Compatible image capturing device with adequate detachable and storage memory devices (CD Writer). 5. Field of View: 120 degrees or more. 6. Depth of field: 3 mm to 100 mm or better. 7. Direction of View: Forward viewing. 8. Distal end dia: At least 6 mm. 9. Insertion tube dia: At least 6 mm. 10. Working Length: 580 mm to 600 mm. 11. Min. Visible distance: 3 mm from distal end. 12. Instrumental Channel dia: more than 3 mm. 13. Bending range: Up 180 deg and Down 130 deg. 4 System Configuration Accessories, spares and consumables 4.1 Standard set should include: • Biopsy forceps (Fenestrated and Alligator type) - qty 1 each • Grasping Forceps (Shark Tooth type) - qty 1. • Cytology Brush Set (qty 10-12 brushes) with Reusable Cannula sheath - qty 1. • Coagulation Electrode with cord - qty 1 no. • Cleaning and maintenance kit. 4.2 Separate Instrument channel for therapeutics. It should be compatible with the above-mentionedvideo processor unit, Xenon light source, RGB colour monitor and image capturing device. Standard set should include: • Biopsy forceps (Ellipsoid) - qty 1 each. • Cytology Brush set (qty 6 pieces, disposable type). • Cleaning and maintenance kit. 5 Environmental factors 5.1 The unit shall be capable of operating continuously in ambient temperature of 20-30 deg C andrelative humidity of 15-90% 5.2 The unit shall be capable of being stored continuously in ambient temperature		

		of 0-50deg C andrelative humidity of 15-90% 6 Power Supply None 7 Standards, Safety and Training 7.1 Certified to meet the current leakage requirement of IEC 60601-2-18 or equivalent standard forMedical Equipment particular requirement for safety of endoscopy equipments. 7.2 Should be FDA/CE or BIS approved product 8 Documentation 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection from factory. 8.3 List of important spare parts and accessories with their part number and costing. 8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. Thejob descriptin of the hospital technician and company service engineer should be clearly speltout.		

Annexure A : Specification for Supplies

Package Four : Obstratic & Gynacology

Nr	Equipment and Instrument	Specification		The most appropriate answer	Required Number
1	Ultrasound with facility & Color Doppler +3 Probs	1	The unit shall comprise of fully digital diagnostic ultrasound system capable of electronics phase array, convex and endocavity scanning in B, M, continues wave (CW) and color doppler modes with facilities for digital software upgrading. The unit shall be mounted on a mobile stand on caster casters and shall have the following features and components.		1
		2	The unit shall operate on power supply of 230V (± 10%), 50Hz AC mains power supply drawn from a single power cord. A UPS with backup time atleast 15 minutes must be provided.		
		3	High resolution 19" LED Blacklit monitor, tiltable, height adjustableand rotateable for user convenience.		
		4	Following Harmonic, Color Imaging, Transducers should be supplied with offer.		
			4.1 Electronic multi-frequency convex to cover 2-8 MHz range and scanning width of 60mm to 40mm with the angle within		
			4.2 Trans vaginal probe to cover 4- 9 MHz range and		

				scanning width of 10mm and scanning angle at least 150 FOV.		
				4.3 Electronic multi-frequencyLinear array probe to cover 5 - 12 MHz range and scanning width of 38mm Aucostic Lense.		
			5	The unit shall be associated and incorporate with the facilities sfecified below.		
				5.1 Scanning modes of sector array, convex and Liner Array.		
				5.2 Display modes of B-mode, M-mode and B/M mode, Color Doppler, Directional power Doppler (DPDI) and 2D dual /Color live mode should be possible to display and Should have Duplex and Trplex mode.		
				5.3 Facilities of harmonic imaging, and Q scan.		
				5.4 Real time continuous wave dynamic forcusing.		
				5.5 User selective display formats of two side by images in each display mode and quad mode.		
				5.6 Displaying imaging depth should be 2cm to 30cm, probe dependant.		
				5.7 Facility to scroll up and down the depth of field should be available.		
				5.8 Measuring facility using calipers with provisions for calculation of distance (4-channels) circum-ference, volume, heart rate, gestational age by GS, CRL, and BPD, Foetal weight, Hip joint angle and Cardiac measurment etc.		

				5.9 Color Doppler flow velocity, pressure gardiant, half pressure time, RI,PI etc.		
				5.10 The Hard Disc image storage capacity should be not less than 120GB.		
				5.11 Three active probe port shall be available for the above system.		
				5.12 DICOM 3 connectivity.		
				5.13 There shall be digital storage facility with CD-R or DVD and USB.		
				5.14 There shall be a video cine memory to replay images in B/M or B/PW		
				5.15 The software shall have facilities to generate reports on measured data.		
				5.17 A B/W Thermal printer with 10 paper rolls.		
			6	The unit shall be supplied with 02 sets of instruct-ion and services manuals in English.		
			7	The equipment shall be warranted for a period of not less than 12 calender months from the date of successful commissioning on full parts and labour basis including all the probes. Such warranty shall also include servicing and maintenance during the period of validity. Bidders must specify in detail the means available to them to implemente such a warranty.		
			8	Bidder shall also quote seperately for a comprehe-nsive service & maintenance agrrement on full parts & labour basis including all the probes for a		

		period of five (05) year after 12 months warrenty.		
2	Spot light for gynae exam.	Floor stand. Flaxible fiber-optic, transmit cool illumination. Provide homogeneous light bright spot of variable size. Height adjustable		2
3	Vaginal speculum Dual	CUSCO'S Speculum Ref IS:5906 1.Material : SS (Ref IS6603, 1972) 2.Sizes : Large 110x37mm Medium 90 x 36 mm Small 80 x 24 mm Max. opening of blade 45 deg (one each) 2.Handle thickness 2.5mm 3.Blade size should be appropriate, confirming to sizes mentioned above. 4.Workmanship: All surfaces shall be free from burrs, pits, cracks. Edges shall be smoothly rounded off & shall not be sharp. 5.Polished bright.		3
4	Dressing Drums	• Material Stainless Steel (S.S.) • S.S. thickness 0.5mm • Body, lid built 1mm • Hasp 3mm • Hinge Wire 4 to 5m • Handle 0.9m • Chain 2.8 to 3.57 • Clamp 275m x 132 m (20) • Size 300 x 250mm (10) • The hose shall rest on: i. Three / more rest without shake / play ii. The lid shall have a snap fit on the body iii. The hinges shall have the swivel of the lid and the movements shall be such as to make the lid come back to it's position of closing without any side pressure being applied.		6

		iv. The hasps shall engage with disengage from the stable position. v. The belts shall fit snugly and bear uniformly on the surface of Drum without any pockets or undue rubbing at any place. vi. The clip when clamped shall keep the belt in a fair tension and shall not recoil. It shall enable the belt to slide around the body easily in it's open position. vii. The sets of perforation on body shall have 39 holes of 2.4 diameter		
5	Obstetric forceps – Wringles	Obstetric forceps – Wringles		2
6	Obstetric forceps – Ferguson	Obstetric forceps – Ferguson		1
7	Bowel SS for placenta	Bowel SS for Placenta Size : 16" Surface: Well polished without any cracks & wrinkles. Should not rock when kept on a level surface.		2
8	Basin SS on stand	Steel tubular frame 1" diameter, SWG 16 with iron rod attached to the ring for towel. Size of basin – 16" Height approx. 85-90cm Epoxy coating 50 microns white colour Three legs base interconnected with steel rods. Legs to be provided with three 50cm Nylon swiveling castors.		2
9	Douche can SS	• Material Stainless Steel • Capacity 1.5 liter • Diameter (Approx.) 125 – 135m • Height 135-140m • It should be supplied with standard douche set conversions of nibble lubing high quality, stainless steel clep, Douche nozzle (plastic) with stop cock. • Male witheral Dilutor Set		2

		• Material Stainless Steel • Type laser olive lip • Set of 12 different sizes • Gibs 0/2 to 9/12 English Gauge • Lenth 280 m • To be supplied in a velvet luved Box		
10	Bed Pans SS	**Bed Pans (M) – 5nos.** **General / Technical Specifications** • Bed Pan Male with Cover & Handle. • Material: Stainless Steel (304 Gauge 18) • Welding: Leak Proof with Argon or Equivalent Welding. Stainless Steel in standard size **Bed Pans (F) – 5nos.** **General / Technical Specifications** • Bed Pan Female with Cover & Handle. • Material: Stainless Steel (304 Gauge 18) • Welding: Leak Proof with Argon or Equivalent Welding. Stainless Steel in standard size		10
11	Foetoscope (Ultrasound) & Foetoscope (Pinnard)	**Foetoscope (Ultrasound) 1no.** Pocket make Digital FITR display upto 240-250 / minute Sound Volume adjustable Power: By Battery **Foetoscope (Pinard's Pattern) REF. IS 6565-1no.** • Material Aluminum complying IS: 21, 1959 • Shape (i) Diameter Ear end Outer 55mm		1 each

		Inner 50mm Distal Inner 14mm Outer 60mm (ii) Length 145 mm • Workmanship: The surfaces of the Foetoscope shall be free from scales, burrs, pits. Edges shall be smooth rounded off and shall not be sharp. • Shall have perfectly symmetrical dimensions around the central axis. Rims of fetal end and ear end shall be in one plane, the stethoscope shall anodized in accordance with grade AC5 of IS: 1868, 1968. It shall be tested as IS: 6565, 1972.		
12	Craniotomy set	Material Stainless Steel Braun Decapitation Hook (32.5) cms Dubious decapitation Hook (Embyotomy Scissors) Ternier Basiohite (cephalotibe) 44.0 Smellie perforator 27 cms		1
13	Vacuum extractor	To be used for vacuum delivery. Vacuum extractor must be easy to use (to assemble and to clean) and safe. Vacuum extractor should be totally disassembled, easy to clean and sterilize (all parts must be autoclaved at 121^0C. All parts should be manufactured from high-strength, long-life materials and require no special maintenance or storage conditions. Vacuum extractor must be in conformity with council Directive 93/42/EFC on Medical Devices and have CE marking. Vacuum Extractor should be supplied as complete set in a box with: : curratage extractor kit 3different sizes:		1

		40mm opening diameter. 50mm opening diameter. 60mm opening diameter. 3soft vacuum extractor cups “SILC-CUP” complete, 3 different sizes: 40mm opening diameter. 50mm diameter. 60mm opening diameter. should be supplied with pneumatic foot switch and tubing should be not less than 5 meters.		
14	Sim’s speculum	1.Material : SS (Ref IS6603, 1972) 2.Sizes : Large 72x34/80x38mm Medium 70x32/75x35mm Small 65x26/72x30mm Max. opening of blade 45 deg (one each) 2.Handle thickness 2.5mm 3.Blade size should be appropriate, confirming to sizes mentioned above. 4.Workmanship: All surfaces shall be free from burrs, pits, cracks. Edges shall be smoothly rounded off & shall not be sharp. 5.Polished bright.		4
15	**Resuscitation Unit consisting of** **-** O_2 therapy unit -Ambu Bag -Laryngoscope -Endotracheal DG Tube	Ambu Bag neonatal 250ml tidal volume. Laryngoscope Miller Type blade SS size 0,1,2 - straight Endotracheal Tubes size 2.5, 3. Compatible Macgill’s Forceps Suction Catheter- Disposable 12nos. Infant feeding tube – 12no. disposable Oxygen Therapy Unit Cylinder on trolley with humidifier & rotameter		3
16	CTG (Cardiotocograph)	Cardiotocograph antenatal (NST) and intra partum fetal monitor. Fetal monitor for three functions		1

		a.Fetal Heart rate recording b.Toco-recording (For intrauterine pressure recording) c.Maternally sensed fetal movement recording. · Twin monitoring facility required. · Colour coded transducers, plugs and sockets. · Very compact and light weight. · Detachable printer · 1.5 MHZ multi crystal directional pulse Doppler. FHR detection with low ultrasound energy exposure to fetus. · Optimize, fully screened and water proof FHR transducer the transducer and belt clip are designed for ease of use · Built in transducer storage. · Manual or automatic Toco-Zero light weight flat faced with guarding type toco dynamo meter. It has the same belt clip and belt in, as the transducer ·: Display should be LED to display FHR and other informations. · should be able to print in a4 size Z fold paper · Actogram – Automatic movement signal can be printed on the chart record as a graph or as any event marks · True dual channel twins print out · Purpose designed trolley/cart · Displays twin fetal heart rates in separate displays. · Automatic fetal movement detection Should be supplied with 2kva online UPS · Built in network capacity.		

Annexure A : Specification for Supplies

Package Five : Opthalmology and ENT Diagnostic & Treatment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Ophthalmic unit (chair unit)	Required Ophthalmic features:- - one fully upholstered elegant ophthalmic chair with full motorized recline facilities with full motorized up & down movement for 200mm - one stand and console:- with illuminated soft light for examination with controls for ophthalmic chair, for recline and up & down movements, back and forward movement. One foot pedal for the up and down movement is also required. - Required Base dimensions and Floor space Base Dimensions : 1420 mm x 1420 mm Floor Dimensions : 1420 mm x 2325 mm Base Dimension Floor Space required Base Dimensions : 1420 mm x 1420 mm Floor Dimensions : 1420 mm x 2325 mm Height 6 feet Length after reclining 6 feet Width 4.8 Ft Input voltage & Power 110/230V		1

		Accessories required:- Examiner's chair Trial lens set (2nos.) Trial Frame Auto Refractometer with all standard features with 10 paper rolls Distance vision horizontal drum		
2	Retinoscope	Shall have separate control for streak width and streak rotation and also streak width should not change while rotating & the entire head is rotatable . It should have endless rotation that the streak revolves 360 ^{0} without stops , enabling quick measurement of astigmatic axis. Used with Rechargeable battery RP-B The plug comes out of the handle with a press of a button RX head, plug-in rechargeable battery handle, spare bulb, +2D Presbyopic lens Bulb : 4V, 3.6 W Instrument Weight : 350 g Total Weight : 700 g		1
3	Doctors stool	Dental operator's stool with backrest movement and hand rest. On swivel castors.		1
4	Slit lamp	Magnifications: 5x, 8x, 12x, 20x, 32x Field of view : Ø 46, Ø 29.5, Ø18.4, Ø11.5, Ø 7.5 mm in diameter. Eyepiece magnification: 10x high-eyepoint eyepieces, + 8D compensation Width of slit image : 0 – 14 mm, continuously adjustable Length of slit image: in steps: 0.3 / 2.5 / 3.5 / 7 / 10 / 14, Triple Slit Slit rotation : + 90°, continuous Angle of incidence: 0 ^{0} Horizontal Filters : Swing in blue, green (red-free), Heat absorbing filter and swing in screen for diffuse illumination		2

		Free working distance: 66mm Exit prism/patient's eye Vertical Movement : 36 mm Lateral Movement : 107 mm Depth movement : 113 mm Horizontal fine movement : 14 mm Vertical travel of chin rest : 76 mm Illumination: 6 V, 20 W halogen bulb Brightness: Continuously adjustable Instrument table: motorized control Accessories required:- Goldman Applanation Tonometer The product should be CE certified/USA FDA approved		
5	Keratometer	Specifications: The following are illustrative but not restrictive 1. Measuring Range : Corneal curvature radius : 5.00 to 13.00 mm (0.01 mm increments) Corneal refractive power : 25.96 to 67.50 D (n=1.3375) (0.01/0.12/0.25 D increments) Corneal Cylindrical power : 0 to ± 12.00 D (0.01/0.12/0.25 D increments) 2. Axis of Corneal : 0-180° in 5°steps. Astigmatism 3. Corneal size measurement : 10.0 to 14.0 mm (0.1 mm increments) 4. Electric supply : 220V-240V,50Hz 5 Calibrating steel balls 6.Essential spares a) Bulbs : 6 Nos b) Fuses :4 Nos		1
6	Lensometer	1. Auto focus /Auto alignment/Auto centring 2. PD measurement : 20.0 to 49.5 mm (monocular), single vision, PD , progressive lens for vision PD 3. Measurement Range :pectacle Lens : -25 to +25 D		1

		4. Contact lenses : -25 to +25 D (BC= 6.0 to 9.0) (0.01/0.06/0.12/0.25 D increment) 5. Axis : 0 to 180 ^{0} (1 ^{0} increments) 6. Wavelength / Measuring point : 535 nm (green)/ 108 with nosepiece. 7. Dimension : 220 (W) x 252 (D) x 430 (H) mm/ 5.0 Kg 8. Measuring Time v: 0.06 second ± 10% (minimum) 9. Measurable transmittance : 10% and over (20% and over for ± 15 to ± 20D) 10. Making System : Ink cartridge type 11. Display : 5.7 inch color full graphic TFT-LCD, 640 x 480 dots with LED backlight. 12. Printer : Thermal line printer with auto cutter (paper width : 58 mm) 13. Able to detect power of progressive lenses 14. Able to detect UV absorption capacity of lenses 15. Printer attachment and auto save facility 16. Power: 220- 240 V 17. Motorized table		
7	AB-Scan	The following requirements must be met • High resolution dedicated A and B, ophthalmic Scanning unit Bscan will cross vector. • Ultra sound probe should be permanent oil filled & compact probe with a frequency 10MHz (+/- 15%) with a scanning angle of 60 ^{0} and a speed of 10 MHz Technical Features: **A-scan** • Three A scan Modes • Measurement mode : Manual , Auto, Semi Auto, Speedy • Complete IOL program capabilities include SRK1 SRK11 SRK. T Hollady or Binkhorest formulas. • Measurement value : Axial length, Anterior chamber depth, lens thickness, Vitreous body length • 10MHZ solid probe • The unit should incorporate, audio feed back for probe alignment.		1

		B-scan • 256 Gray Levels • Scanning Range : 35 mm or 50 mm from the edge of the probe (+/- 10%) • Display Mode : B-Scan (B+) Ability to display multiple B Scan images (maximum of 4 saved images) • Complete IOL calculation capability with IOL data storage. • B-scan sector angle 60 deree • Standard Accessories Should include : Stylus, B-Scan Probe, A-Scan Probe, Foot switch, Test piece, Printer paper, power cord, Ultrasonic Gel, Dust cover, spare fuse , probe rest • Vendors may quote other optional accessories		
8	Operating Microscope - Ophthalmology	Apochromatic optics Magnification: 5 step magnification Focusing Range: 158 mm Binocular tube: 45 degree inclined. Eye pieces: 10X Objective lens : F=175 Total magnification: 2.6 x to 15.8 x Illumination: Halogen illumination, Fibre light guide, 15 V 150 W as light source. Catathemric filter, Green Filter Swing in daylight filter Foot switch with full control on foot switch Stand Arm section Type: Floor stand type Arm extension: 1045 mm Balance arm vertical stroke: 350 mm The product should be CE certified/USA FDA approved		1
9	Tonometers (Non-Contact)	· **General features** · Measurement: Non invasive automatically activated as the cornea is in focus · Working distance: 11mm · Air pulse: soft pulse with no additional administering of anaesthetic/indicator · Alignment / Observation method : 5.7 inch color LCD Display · Technical specifications: · Electrical requirements: AC 100 to 240 V ± 10% 50/60 Hz		2

		· Power consumption: 150W · Hand set dimentions: 40X 270mm · Base unit dimensions: 320X310X180mm Auto tracking / Auto shot : X-Y-Z direction Auto Shot Measurement range : APC 40, APC 60, 40, 60 Interface : Rs 232, LAN, USB · Weight: 19 Kg. (Approx) · Cooling: Air cooled · **Accessories:** · Printer Paper, Power Cord, Dust Cover, Fixing pins for chinrest paper ,Pack of chinrest paper		
10	Ophthalmoscope	Specifications: Lenses Range : 35D to +35D in 1 D steps and the wheel is rotatable. Apertures Standard Aperture, Small Aperture, Slit Aperture, Red Free Filter Aperture, Concentric Scale Aperture with all apertures. Superior aspherical optics Mounted in metal frame Electrically rechargeable handle With 3 V "C" Cell battery with charger . Dust proof housing. Ergonomic shape Complete set in box with spare bulbs 3 V Halogen (6 Nos.) Diopter of the corrective lens is indicated directly even when using high Plus or Minus powers. The indicator is illuminated from inside Instrument weight : Not more than 300 g Total weight : not more 550 g Case Size : 85 mm (D) x 245 mm (W) x 45 mm (H). The equipment offered should be brand new.		2
11	Pure tone Audiometer-clinical	Specifications: · Digital audiometer, TDH-39 headphones, CPU with monitor, software. · AC:. (125-8000Hz-10 to120db · BC : 250 to 8000 Hz -10 to 80 dB		1

		· ABLB · SISI · Audiogram on pc can be controlled via the audio meter · Micro-processor controlled · NOAM/S/W compatible · Access yes hearing aid fitting sw is offered by the companies selling hearing instrument and thus not include in this offer · Two separate channels for binaural speech tests · Tone decay tests · Facility for free field option- · Synchronised automated masking · Talk forward/talkback system two way communication-optional acc. In two room · Setup microphone for speech test · Desktop-pure tone, masking, speech audiometry, speakers, facility for special tests, printer to be supplied with voltage stabilizer with tables for the printer and for the audiometer		
12	Impedance Audiometer	Specifications: Essential Power supply: 220 V, 50 Hz (226 Hz) Probe tone: 220 or 226 Hz Probe assembly with contra lateral test facility (with supra aural earphonesL (contrlateral with contralateral earphone CIR 55 TDH 39/TDH39A/TDH49/TDH49A/TDH 50 with MX 41 AR ear cushions or inserts (Optional contralateral headphone DD45 C (similar to TDH 39)) earphones (ER tone3A) Test cavities (0.5,2,5cc) Probe tips- assorted Printer Test required · Compensated tympanometry (ear canal volume and tympanometric peak pressure) · Ipsilateral and contra lateral acoustic reflexes		1

		Air pressure range: +200da Pa to -400da Pa Stimuli for acoustic reflexes: Type: Pure tones Frequencies: 500Hz, 1000Hz, 2000Hz and 4000Hz Intensity: up to 120Db HL Contra lateral Power supply: Battery operated & main + rechargeable battery Instruction and service manuals		

Annexure A : Specification for Supplies

Package Six : Operation Theatre Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	A closed loop anaesthesia equipment complete with vaporizer & circle absorber (Anaesthesia work station)	**1 Description of Function** 1.1 Anesthesia Workstation is used for delivering anaesthesia agents to the patients during surgery. The complete unit also monitors the vital signs and ventilates the patients. **2 Operational Requirements** 2.1 1) Anaesthesia machine complete and integrated with Anaesthesia gas delivery system; Circle absorber system; Precision vaporizer for halothane, isoflurane / Sevoflurane; Anaesthesia ventilator. Monitoring system to monitor Anaesthetic gases, ECG, EtCO2, FiO2 (Online O2 Analyzer), Pulse-Oximeter and airway pressure, NIBP, IBP (No as required), rectal/&skin temperature. 2) Essential accessories to make the system complete and compatible with the existing system of gas outlets. **3 Technical Specifications** 3.1 Flow management 1. Should be Compact, ergonomic & easy to use 2. Multi-color TFT display of at least 12” size, with virtual flow meters for O2, N2O or Air 3. Dual flow sensing capability at inhalation and exhalation ports. 4. Should have back-up O2 control which provides an independent fresh gas source and flow meter Control in case of electronic failure.		5

		5. Gas regulators shall be of modular design/ graphic display 6. One no. yoke each for Oxygen & Nitrous Oxide. Separate Pipeline inlet for Oxygen, Nitrous Oxide and Air 7. Hypoxic Guard to ensure minimum 25% O2 across all O2-N2O mixtures and Oxygen Failure Warning. 8. Machine should provide electronic gas mixing. 3.2 Breathing system 1. Latex free fully autoclavable. 2. Flow sensing capability at inhalation and exhalation ports, sensor connections shall be internal to help prevent disconnect. 3. Sensor should not require daily maintenance. 4. Bag to vent switch shall be bi-stable and automatically begins mechanical ventilation in the ventilator position. 5. Adjustable pressure limiting valve shall be flow and pressure compensated. **3.3 Standard Circle Absorber System** - Should have adjustable pressure limiting valve, breathing circuit pressure measuring device. - Should have a bag/ventilator selecting valve integrated onto the absorber. - Should be suitable to use low flow techniques - Facility to attach oxygen sensor. Should have CO2 absorbent chamber canister **3.4 Vaporizers** 1. New generation Vaporizer must be isolated from the gas flow in the off position and prevent the simultaneous activation of more than one vaporizer. 2. Vaporizer should mount to a Selectatec manifold of 3 vaporizers, which allows easy exchange between agents. Temperature, pressure and flow compensated vaporizers and Maintenance free – for Isoflurane, Halothane, and Sevoflurane **3.5 Ventilator (Integrated)** 1. The workstation should have integrated Anesthesia Ventilator system for adult		

		and paediatric. 2. Ventilator should have Volume Control and Pressure Controlled SIMV and PEEP. 3. Ventilator should have a tidal volume compensation capability to adjust for losses due to Compression, compliance and leaks; and compensation for fresh gas flow. 4. The workstation should be capable of delivery of low flow anesthesia. 5. Ventilator should be capable of at least 120-150 L/min peak flow to facilitate rapid movement through physiologic “dead space” in the Pressure Control mode. **3.6 1.Anesthesia Monitoring System should be modular:** a) Monitoring of vital parameters: ECG (5 leads) with ST segment analysis, NIBP, SPO2 and 2 Invasive Blood Pressure & Spirometry with display of flow volume loops & spirometry loops. b) Twin temperature measurement with skin and rectal probes- Two sets with each monitor c) Automatic identification and measurement of anesthetic agents, EtCO2, O2 and N2O and MACvalue. FiO2 measurement d) Depth of Anesthesia Monitoring module - one per monitor with 50 sensors with each monitor e) Neuromuscular Transmission Monitoring with all accessories. One set with each monitor f) Cardiac Output measurement facility by thermo dilution technology with all accessories- one set for three monitors. g) 24hrs of graphical and numerical trending h) Should have Hemodynamic, Oxygenation and Ventilation calculation package i) Should include inbuilt Anaesthesia record keeping software facility in all OT monitor to document anaesthesia event using standardized menu based entries. j) Facility to store snapshots during critical events for waveform review at a later stage k) Audio visual and graded alarming system 2. Display of Ventilator: a) Tidal volume (VT)) b) Inspiratory/expiratory ratio (I:E)		

		c) Inspiratory pressure (P-inspired) d) Pressure limit (P-limit) e) Positive End Expiratory Pressure (PEEP) **4 System Configuration Accessories, spares and consumables** 4.1 Anaesthesia Gas Delivery systems -01 4.2 Circle absorber –01 (Twin Chamber) 4.3 Ventilator -01 4.4 Monitor -01 4.5 Vaporizer Halothane -01 4.6 Vaporizer Savoflurane -01 4.7 Vaporizer Isoflurane -01 4.8 Adult and Paediatric autoclavable silicone breathing circuits -02 ea 4.9 Reusable IBP Transducer -04 4.10 Disposable domes-100 4.11 Temp probe Skin reusable- 02 4.12 Temp probe Rectal Reusable-02 4.13 Accessories Anaesthetic gases-01 set 4.14 Depth of Anesthesia Sensors-50 4.15 Accessories for Cardiac Output module- 01 set 4.16 Accessories for neuromuscular transmission monitor- 01 set 4.17 Standard accessories to make all parameters working- 01 set 4.18 Disposable Adult & Paediatric circuits- 50 each. 4.19 HME filters- 50 4.20 Vital Parameter Accessories-01 Set 4.21 Should be supplied with negative pressure leak test equipment 4.22 SPO2 reusable probes Adult & Pead – 2 Each 5 Environmental factors 5.1 The unit shall be capable of operating continuously in ambient temperature of 100C - 400C and relative humidity of 15-90% 5.2 The unit shall be capable of being stored continuously in ambient temperature of 00C - 500C and relative humidity of 15-90% 5.3 Shall meet IEC-60601-1-2: 2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		

		5.4 Safe disposal system/port of waste anesthetic gases (AGSS Anesthetic Gas Scavenging System/Port) should be in place. Supplier will be held responsible if this is not ensured at the time of installation **6 Power Supply** 6.1 Power input to be 220-240VAC, 50Hz,/440 V 3 Phase as appropriate fitted with plugs 6.2 Resettable over current breaker shall be fitted for protection 6.3 Suitable Servo controlled Stabilizer/CVT 6.4 UPS of suitable rating shall be supplied for minimum 1 hour backup for the entire system **7 Standards, Safety and Training** 7.1 Should be FDA or CE approved product 7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 7.3 Certified to be compliant with IEC 60601-2-13-Medical Electrical Equipments part 2-13:Particular requirements for the safety of Anaesthesia Workstations 7.4 Should have local service facility .The service provider should have the necessary equipments recommended by the manufacturer to carry out preventive maintenance test as per guidelines provided in the service/maintenance manual. 7.5 All imported components like anaesthesia machine, monitor and ventilator should be from one manufacturer/principal. **8. Documentation** 8.1 User Manual in English **8.2 Service manual in English** 8.3 List of important spare parts and accessories with their part number and costing 8.4 Certificate of Calibration and inspection from the factory 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and		

		company service engineer should be clearly spelt out. 8.6 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual. 8.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/Para number of original catalogue/data sheet. Any point, if not substantiated with authenticated catalogue/manual, will not be considered.		
2	Operation tables, 4 section hydraulic	**Description of Function** • Hydraulic operating Tables are simple tables for performing surgical procedures and they work without electrical power. **Operational Requirements** • OT Table is required for general surgery and should have X-Ray translucent tops. **Technical Specifications** • A.Four section table top with divided foot section b. Table top should permit x-ray penetration and fluoroscopy c. All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section should be operated hydraulically d. Should have a manual position selector e. The casings on the frame and centre supporting column should be made of hygienic stainless steel f. Mattress should be radioluscent and suitable for fluoroscopy • Measurements:(approximate) a. Height: :770mm-1000mm b. Side tilt: :right 20 degrees,left 20 degrees c. Back section adjustment::-15 degres to 75 degrees d. Foot section adjustment:: -90 degrees to +15 degrees e. Trendelenburg:: 25 degrees f. Anti trendelenburg:: 25 degrees g. Head section adjustment:-90 to +20 h. : should be 360 degrees rotatable		4

		System Configuration Accessories, spares and consumables • ACCESSORIES: All accessories including the ones listed below should be quoted. The specific accessories and their quantity will depend upon actual requirement a. Padded arm rest with straps - pair with clamps b. Anaesthesia screen with clamps c. Side supports: pair with clamps d. Shoulder supports: pair with clamps e. Knee crutches for lithotomy position: pair with clamps f. X-ray cassette tray g. Kidney bridge h. Patient Restraint Strap i. Waste tray **Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% **Standards & Safety** • Should be FDA , CE, UL or BIS approved product • International Safety standards like IEC 60601-2-46 or equivalent if applicable		
3	Operation tables, 5 section hydraulic-For orthopaedic	**Description of Function** • Operating tables provide an elevated surface that supports the patient's body during surgical procedures, stabilizing the patient's position and providing optimal exposure of the surgical field. **Operational Requirements** • C-arm compatiblity with hydraulic operation table **Technical Specifications** • **Following are the minimum essentials, quantity& size,minor details**		1

		to be specified by the user: It should be removable, four or more sections of tabletop: * Independently removable section * Full Length radio transparency along entire length with ability to move C arm under and around table throughout its length. * Besides, normal elevation of column, the table top should be capable to lift * There should be provision for lifting the trunk and pelvis sections either separately or together, anatomically elevated at the same height * Head section with adjustment for optimum positioning * The table top should allow the use X-ray cassette all over its length *The pads should be removable for hygiene and cleaning,bacteriostatic, should be made of long life material. All types of Orthopaedic position like beach chair, for discectomy surgery, femoral& tibial interlocking etc should be feasible. • Motorized Movements: * HeightAdjustmentRange : 200 mm or more * table top sliding :250mm * Lateral Tilt ::25 degrees * Trendelenberg ::30/-30 degrees • Column: Column for above table top, complete with built-in maintenance free battery. Column should be movable on trolley. • Trolley: For moving the table top and column with facility for height adjustment and trendlenberg tilting **System Configuration Accessories, spares and consumables** • Standard Accessories: * Water proof foot pedal for table top height adjustment and indicators * Thigh Holder: Pair of thigh holder, swiveling, adjustable via ball & socket joint, lengthwise and laterally adjustable. Complete with pads, fixing straps and clamps		

		* Instrument tray, sliding or rail, Dimension: App x 320x 350 mm * Mobile Frame: Mobile frame, with stainless steel bucket, complete with 4 castors * Cassette Holder: Holding arm for positioning x-ray cassettes under radio transparent table top. Mounted on side rails by means of clamp. * Insertion Bar: Bar for insertion of x-ray cassette, under the table top. • Attachments: * Lower Limbs Traction Device * Femoral Nailing Device * Knee Arthroscopy Device * Meniscus Positioning Device * Hip Prosthesis Device * Humerus Positioning Device * Shoulder Arthroscopy Device * Spine Cord Positioning Device * Hand Surgery Table **Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% • The unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70% **Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian plug • Energy requirement and efficiency should conform to Indian Bureau of energy efficiency etc. **Standards, Safety and Training** • Should be compliant with IEC 61010-1:(or any international equivalent eg EN/UL 61010) covering safety requirements for electrical equipment for		

		measurement control and laboratory use • Should be CE, FDA approved . • Comprehensive training for lab staff and support services till familiarity with the system. **Documentation** • User/Technical/Maintenance manuals to be supplied in English • Certificate of calibration and inspection.		
4	Laryngoscope (Rigid	Each set should have following contents;- Blade size 55mm Blade size 80mm Blade size 130mm Blade size 170mm Blade size 180mm 3.5 Volts halogen/ krypton bulb, with handle, rechargeable battery and Charger		2
5	Patient Warmer	**Base Unit:-** 1. The set temp range in the unit should be from 32° - 43°. 2. Air flow must be between 40-50 cfm. 3. Air filtration capacity should be highly efficient-must be ≤0.3 microns. 4. The sound level should be <50db. 5. It should be light weight, between 5-6 kgs 6. It must be CE certified. **Blanket:-** 1. It should be made of soft material (Polypropylene or Polyethylene material) with superior top layer having insulating & radiating qualities. 2. It should be extra wide to tug in patients. 3. It should be non conductive, non irritable & must confirm flammability standard. 4. It should be latex free 5. It should be supplied with 50 adult & 50paediatric blankets.		2

6	Spot Lamp	Floor stand. Flaxible fiber-optic, transmit cool illumination. Provide homogeneous light bright spot of variable size. Height adjustable		2
7	Patient Trolley	non-corrosive trolley and hinged arms		1
8	Surgeon Chair	**Standard**		1

Annexure A : Specification for Supplies

Package Seven : OPD Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Diagnostic Set (Stethoscope, Blood Pressure Apparatus, Thermometer, Hammer, Tuning fork, Tape etc.)	Set complete of good durable quality material. Consisting of: (Adult & Ped Stethoscope Littman Type, Blood Pressure Apparatus Aneroid Type-Ref.IS7652, Infant Weighing Machine, Thermometer, Patella Hammer (Taylor Type design), Tuning fork (standard 108, 75Db), Tape with clearly visible markings, SS Tongue Depressor, Torch(2-cell).		22
2	Weighing Machine	• Portable-Adult • Scale in Kg with 0 adjustment. Weight up to 200kg. • Shell of Steel 1mm thick • Approx size: 300 mm L x 300mm W. • Epoxy coated		22
3	Minor OT instrument set (Surgical & Gyane)	Three folding with adjustable head & foot rest. Size: 180cmL X 50cmW X 80cmH The central section should be adjustable for trendelenburg positions. Material Body : Stainless steel Leg Holders: Stainless steel Unit shall conform to relevant safety standards & general safety standards for medical equipment as per IS8607.		2
4	Minor OT table	(Four) folding with adjustable head & foot rest. Size: 180cmL X 50cmW X 80cmH The central section should be adjustable for trendelenburg positions. Material Body : Stainless steel		2

		Leg Holders: Stainless steel Unit shall conform to relevant safety standards & general safety standards for medical equipment as per IS8607 All table positioning, i.e., height, back section, lateral tilt, trendelenburg, and anti-trendelenburg, except foot and head section should be operated hydraulically d. Should have a manual position selector e. The casings on the frame and centre supporting column should be made of hygienic stainless steel Measurements:(approximate) a. Height: 770mm-1000mm b. Side tilt: right 20 degrees,left 20 degrees c. Back section adjustment::-15 degres to 75 degrees d. Foot section adjustment: -90 degrees to +15 degrees e. Trendelenburg: 25 degrees f. Anti trendelenburg: 25 degrees g. Head section adjustment::-90 to +20 should be 360 degrees rotatable		
5	Minor OT Ceiling Light	The unit should have reflector for optimum utilization of the dual reflector by means of targeted light direction technique with following specifications: - Power supply: 230V, 50/60Hz - Colour Temp : 4200K - Light intensity at (1m) distance : (160,000 lux) - Light field diameter : 180-200mm - Colour rendering index Ra(1-8)-93 - Lamp head rotatable:230 degrees - Power consumption :24V/150W - Working space :700-1300mm - Lifetime of bulb : Atleast 2000hrs. - Action diameter:3180m - Vertical adjustment : 1250mm - Focus depth:500-700mm - Should have CE certification for electricity safety		2
6	X-ray View Box	• Single film		22

	(Single)	• Good quality imported Perspex sheet, uniform and bright illumination. • Electrical Fluorescent 1/2 tubes fittings with uniform illumination. • Shock proof body. • Heavy duty X-Ray clips (1/2). • On / Off switch with indicator light • Confirm to standard electrical safety norms.		
7	Air Mattress	Alternating pressure every 10 minutes. Whisper quiet with adjustable pressure settings. Low pressure/Normal pressure indicator lights. Patented CPR release. Convoluted safety foam base with water proof covering to eliminate contamination. Low friction/ shear water proof top cover. Maximum patient weight 150 kg or more. Inflated dimensions approximately 35"Wx80"Lx8"H.		2

Annexure A : Specification for Supplies

Package Eight : Radiology-Investigative

(EMD: SLR 320,000/-)

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Computed Radiography (CR) System	**1. GENERATOR:** Two pulse. • Radiographic Parameters Maximum mA Output: 500mA		1

	500 mA X-ray Machine with IITV	Maximum kV Output: 125kV • Fluoroscopic Parameters Maximum mA Output: 3mA Maximum kV Output: 90kV • Exposure Time From 5 Milisecond to 5 Seconds with digital mAs integrator. The generator should be provided with Rapid anode Braking Device (to increase tube life). Automatic computation & display mAs value kV digitally to be provided. **2. X-RAY TUBE:** The unit should be complete with : 2 Nos. of 20/40kW X-ray Tube (BEL or equivalent) with high speed anode rotation of higher rpm each with a pair of H.T. Cable for under couch and over coach radiography. 3. **TABLE** Motorized table vertical to trendelenberg position with automatic stop. Table accessories viz. foot rest, compression band, hand grips, foot step, skull cone, shoulder rest, radiation lead rubber flaps. Bucky with adjustable cassette tray with a grid ratio of 10:1 and 100 lines per inch. Motorized Under Couch Collimator and Manual Over Couch collimator. The Spot Film Device should include the following: • 4 in 1 on 8'X10"Film • 2 in 1 on 10"X12"Film • 1 in 1 on 14"X14" Film along with a suitable grid **4. COLUMN STAND:** Floor to Ceiling with Counter Balancing System. **5. I.I.T.V.**		

		The entire system should consist of the following: • Image Intensifier (II) capable of being coupled with the existing 500mA X-Ray machine and fluoroscopic tables. • High resolution CCD camera to capture the image from the output phosphor of the II. • Trolley mounted 17" Monitor (44"). Minimum specifications of the Image Intensifier: • Nominal entrance field diameter of 23 cm with dual field selection capability. • Output window size 20-25 mm. • Vertical & Horizontal image orientation reversal switches mounted on II. • The assembly should have 'All metal' construction and provide magnetic and lead shielding. Minimum specifications of the CCD Camera. • Should be of PAL Systems with minimum 750 x 580 pixels. • Video Standard 50 Hz 625 lines interlaced. • Video gain should have automatic gain control. • Circular blanking facility. • Video output -1-Vpp composite video. • Last image hold facility must be present. Minimum specification of the monitor: • Minimum 43 cm 17" diagonal with circular mask. • Local controls for image contrast and brightness adjustment. • Should be cart/trolley mounted and moveable anywhere in the fluoroscopy room. The Image Intensifier should be fully counter balanced consisting of ceiling counterpoise system with rails. **5. ACCESSORIES** • Voltage stabilizer servo controlled type of 50KVA capacity. • Lead Aprons – 4 nos. The machine offered should have valid AERB Type Approval.		

		Computed Radiology must be a state of the art system manufactured by a reputed brand or manufacturer adhering to following specifications. CR system should broadly comprise of following modules/ components: a) Image recording system (cassettes & reading plates) b) Image reading system (reader/ digitizer) c) Identification & CR processing workstation. d) Dry imager. **1. Image recording system (cassettes & imaging plates).** **The following sizes of radiography cassettes along with image plates should be supported by the unit.** a. 35 cm X 43 cm or 14" X 17" :4 nos. b. 35 cm X 35 cm or 14" X 14" :2 nos. c. 24 cm X 30 cm or 10" X 12": 4 nos. d. 18 cm X 24 cm or 8" X 10": 2 nos. **2. Image reader (CR reader/ digitizer)** a) The CR reader / digitizer should be able to process 65 image plates/hr or more of the largest size cassette b) CR reader / digitizer must be able to handle phosphor image plates. CR reader capable of handling latest Dual side /needle/structured/ /columnar image plates will be preferred. c) It should have a resolution of 6 pixels/mm (minimum) for standard resolution cassettes & 10 pixel / mm (minimum) for high resolution cassette reading. d) Digitizers must have a resolution of 20 pixel / mm (minimum) for screening mammography. e) Gray scale resolution: CR reader / digitizer should have a minimum resolution of 12bits/ pixel for images sent to CR processing station. **3. Identification Station & processing server** a) The processing station must have 2GB RAM, at least 2x 500 GB HDD in RAID configuration and 19 inch clinical grade monitor. The PC hardware and monitors must be from reputed brands like DELL, HP, and BARCO etc. The monitor should have a wide viewing angle and it should be clinical grade monitor with at least 1.3 MP resolutions. b) Processing server capable of identification of patient demographics to the acquired images will be preferred, else a separate identification station must be		

		provided. c) The server and /or ID station must be DMWL (DICOM modality work list) compliant to access patient and study data from HIS or RIS. d) It should provide display of acquired images with greater details of demographics viz. patient/ study listing for easy access e) The server must provide full amount of post processing features viz. geometric corrections, window level algorithms, annotation like markers, predefined text, drawing lines and geometrical shapes, multi-scale image processing, measuring distance and angles, shuttering, histograms, zoom, grey scale reversal, edge enhancement, noise reduction, indication of gray scale saturation level, latitude reduction etc. f) It should facilitate full fledged DICOM printing and should be able to print multiple formats of patient study. g) Should be able to send DICOM images to DICOM workstation or PACS without loss of information h) Should be equipped with DICOM CD writer for transferring image i) Should be able to store image on external device viz. CD or pen drive etc. j) The system should have a facility to indicate over /under exposure in the preview screen. Kindly specify the image preview time. k) The software must have dedicated paediatric and mammography image processing. **4. Dry imager** a) The system must have a dry imager without need of any wet chemistry b) It must be DICOM 3.0 compatible allowing multiple modalities to be connected at a time c) The system must be able to print at least 60 films/ hr of the largest size d) The system must deliver its first film within 80 seconds from the request sent e) The imager must have spatial resolution of 500 ppi minimum f) The system must have contrast resolution of 14 bits/ pixel or more. The system must have at least three online film sizes and should be capable of printing any of the 8” X 10”, 10” X 12”, 11” X 14” or 14” X 17” films. g) The imager should support daylight loading of films. **5.** Suitable UPS back up must be provided for 15 minutes backup for the whole		

		system **6.** The firm should attach detailed installation list along with users' complete address and telephone number. **7.** Additional specialty software /hardware if any should be quoted separately as optional. **8.** The availability of above mentioned features and technical specification must be substantiated with authentic published documents from manufacturer or regulatory bodies. **9.** The unit should be United States Food and Drug Administration (FDA) and Conformité Européenne (CE) approved for mammography. **10.** The successful bidder will have to ensure onsite training of end users for a period not less than 6 weeks after installation of the unit.		
2	Portable X-ray machine (150 mA)	150 mA high frequency unit for frequent transport and heavy use in- 1. Casualty, operation theatre, nursery, ICU, recovery, labour room, wards, plaster room, orthopaedics procedures and as standalone unit to substitute main x-ray machine. 2. In thick body parts such as chest, abdomen, spin lateral views, hop lateral in restless patients, infants and children. 3. In a 300 bed multi specialty hospital with approximately 150-200 x-rays on main x-ray machine and 15-20 portable x-ray per day. 4. Every feature should be supported by product literature and would have to be demonstrated to technical specification examination committee in various hospitals settings with standard test objects & patients with standard KUP and ampere meters etc. 5. Compatible/ Upgradable with minor modifications for digital radiography in future. Description for supply, generator, tube, console, collimeter stand and miscellaneous items as follows: **Supply** Should work on hospital electricity supply from main 220±10% volts as well as generator supply with no external transformer with 16 amp single phase plug with some buffering device such as on line capacitor etc. to smoothen		1

fluctuations/spike etc.

Generator
1. Fully microprocessor controlled
2. High frequency
3. Allowing a minimum tube current of 150 mA
4. With KVP ratings of 40-125 KVP in steps of 1KV.
5. And minimum exposure time of 5 mille seconds to 5 secs.
6. Should be capable of occational immediate double (repeat) exposure without large time gap.

Exposure table	KV	mA	Seconds	mAS
Thick restless patient, chest 15	55	150	0.1sec	
Thick restless abdomen a) lying b) erect bucky	90	50	1.0	150
Thick spine lateral	125	100	1.5	150
New Born			0.005	
Occasion repeat exposure	90	150	1+1sec	300mAs

X-Ray Tube
1. Rotating anode double focus tube with at least one focal spot 0.8mm or less for fine
radiography with 2800 rpm with anode breaking device and auto protection of tube from over heat, electrical or electronic disturbances and rating & cooling compatible with exposure table requirements and bucky radiography, anatomical programming and automatic exposure control.
2. Tube head should be capable of rotating± 180 degree
3. Tube rating and cooling capacity should be mentioned as maximum continuous thermal
dissipation (e.g.>300W)

Console
1. Soft touch control for easy cleaning and disinfection by spirit or other commonly available material.

		2. Digital display of mAs, KVP, time etc. 3. 2 steps (standby ready and exposure) switch on consol as well as remote operations (by 5meter), preferably wire less. 4. With some self diagnosis such as tube overheating, improper voltage, exposure fault etc. 5. Should have anatomical programming. 6. Compatible with bucky radiography and automatic exposure control. 7. Option with price should be quoted for (a) reduction of dose by half (b) dose area product measuring chamber,(c) automatic exposure control. **Collimeter:** 1. Fully radiation proof 2. Adjustable timer for auto cut off (minimum 30 sec) 3. With field 0-0 to 17”X17” at one meter 4. With retractable measuring tube 5. Angulation indicator. **Tube Arm & Main Frame:** **1.** Stable, spring balanced frame with 4.5 feet horizontal distance between column and tube, safe(accident proof) and effective, durable use by light weighted radiographer (e.g. lady) in O.T, Nursery, Labor Room, and Orthopedic ward etc. **2.** Tube arm rotation of +/- 90 degree for exposing adjacent beds in wards, orthopedic procedures. **3.** Tube head protection in lift or bumping against furniture or walls **4.** Tube head rotation of +/-180 degree for cross table lateral and other oblique and difficult views. **5**. With standard mechanical and safety features for carriage in life, uneven surface passages & doors such as resting and exposure position lock handle release breaks or single paddle breaking in convenient position, large rubber sheathed wheels, lead or equivalent radiation proof lined cassette case for largest size and space for lead apron and thyroid shield etc. **Required Accessories:** 1. Two large sized (0.5 mm) lead equivalent aprons with two thyroid shields and		

		one gonadal shield and other radiation protection devices. 2. Stationery bucky cassette 17”X17” frame for bucky thick part radiography at with stand. 3. Scale for assessment of magnification. **Upgradability & Compatibility** With digital radiography and hospital information services. **Miscellaneous** Warranty 1. Spare parts 2. Should have CE and AERB & BIS certification 3. Local Service center 4. Proven track record in Govt. sector 5. Users list & performance certificate 6. Operation manual, exposure charts, books and suitable support literature. List to be provided at the time of installation.		
3	Radiology & Dark Room Accessories Lead aprons	-Safe Lamp (1no.) -X-ray cabinet Dryer- Heavy duty x-ray film drying machine for 25min. films with stainless steel drip tray. Body should be made of 18guage sheet of stainless steel. -It should have two heating & two blowing units each of standard make. -It should have sufficient dimensions to accommodate 25 films with alternate spacing for film hangers so that films do not get stuck together. -Timer(1no.) -Three Tanks Film Developer with master tank temp. control. (1no.) -Film hangers-(25no.) **-X-Ray View Box (Double)-** (1no.) **:** Two films. Good quality imported Perspex sheet, uniform and bright illumination. Electrical Fluorescent 2/3 tubes fittings with uniform illumination. Shock proof body. Heavy duty X-Ray clips (2/3). On / Off switch with indicator light. Confirm to standard electrical safety norms. **Radiology Accessories:**		1set

		X-Ray Cassettes with intensifying screening • Light weight • Front Side – 1mm Aluminium equivalent • Backside – 0.1mm lead equivalent. Smooth felt pad fitted to the backside for attaching the intensifying screen. • Locking system – Push-Lock type **Intensifying Screens:** ➢ High Speed ➢ Calcium tungstate/ Rare Earth Phosphor (Compatible with double emulsion regular Medical (film) ➢ Blue light emitting (for Ca Tungstate screens) ➢ Polyester base ➢ Universal or Front – Back type ➢ Should be easy to clean. **Sizes: Qty:6 each** 14 x 17 14 x 14 15 x 12 12 x 12 10 x 8 12 x 10 X-Ray Stationary Grid (Grid Ratio 6:1, Parallel) Size 12" x 15" Metal Cassette Passbox (4 Doors) Lead Lines Box for 4 Packets Lead lines box for 6 packets.		

		Lead lines box for 12 packets Feather Weight Apparel (Lead Aprons): BARC approved, 0.5mm Lead Equivalent Medium; (100 x60 cms) 4 Nos. Regular; (110 x 60cms) 4 Nos. THYROID SHIELD - 2 Nos. Protective Gloves - 3 Nos. Lead Goggles: 1mm Pb front and side - 2 Nos. Lead Apron Hanger, capable of keeping multiple aprons (At least 6) X-ray View Box: (Regular long fluorescent tube type, electronic choke, bright screen, aluminum body). Size: 2 x 1 X-ray View Box: (Regular long fluorescent tube type , electronic choke, bright screen, aluminum body). Size : 5 X 1 (Table mounted) Lead marker - 4 set For X-ray Films		

Annexure A : Specification for Supplies

Package Nine : Laboratory Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Binocular Microscope	1. Optical system should be infinity corrected. 2. System complete with illumination system is required. 3. Body: Binocular, sturdy, stable base body with focus adjustment controls. 4. Eye Piece: Paired, high quality, (the image of the object as seen through the binocular eyepiece should be well defined centrally in at least 2/3 field of view), achromatic, wide field, 10x with inbuilt pointer. The eyepiece should be aplanatic and have a minimum field number of 18. Diopter adjustment must be present on one/both eye pieces or on the eye piece tube. 5. Objective: Three objectives 10x, 40x, 100x, 10x and 40x objectives should have numerical apertures of 0.25 and 0.65 respectively and should be of spring loaded type or otherwise, 100x should have numerical apentrue of 1.25 and should be of oil immersion and spring loaded type. Suitable prominent marking should be provided on 100x for easy identification. Unbreakable containers to be provided for storing the objectives. All objective should be wide field, achromatic and parafocal. Making for the Objectives: Each objective should be engraved with the following information's:- • Name of the manufacturer • Magnification and numerical aperture, for example, 10x/0.25 • 100x objective should be engraved with the word 'Oil' in changing from one objective to another or reintroducing the same objective		2

		by rotation of the nosepiece, the object at the center of the filed should not appear displaced by more than 0.02 mm in the object plane in any direction. 6. Nose Piece: Revolving nose piece to accommodate a minimum of three objectives with click stops. It should be provided with ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment. Extra ports if any should be fitted with dust proof metallic/ebonite caps. 7. Stage Uniformly horizontal, mechanical stage having dimensions of length 140 mm (+/-20mm) with fine vermier graducations (minimum reading accuracy of 0.1 mm) the stage should be provided with spring loaded slide holder for exact positioning of specimen/ slide. It should be designed with convenient sub-stage vertical coaxial adjustment for slide manipulation. The stage should have ball bearing arrangement to allow smooth travel in transverse directions i.e. 80mm (+/-5mm) and front to back direction, 50mm (+/-5mm). 8. Sub-stage condenser: Abbe-type condenser, numerical aperture (N.A.) 1.25 focusable with rack and pinion arrangement incorporating an aspherical lens and an iris-diaphragm. The condenser should have a filter holder and removable/swing in/ out blue filter (suitable for bright field Microscopy). 9. Sub-stage illuminator: 1. The system should have a build-in variable light source (illuminator). The light source should have a 20 W, 6 V Halogen lamp. The circuitry for the light source should include a constant voltage supply. The system should be provided with a step down transformer and an on-off switch and intensity control. The lamp should be provided with a lamp socket which has the facility for easy replacement of the bulb. 2. Power Supply		

		a. Voltage 220V, 50HzAC b. Should have one on-off power switch, 3 core power cord with a 3 point male plug. 3. The system should have an inbuilt protective / safety device to withstand fluctuations of voltage from 140 V to 280 V. 4. A plano-concave mirror in fork mounting should be supplied which would be attachable to the base for field use. (Where power is not available). 5. The fuse for the halogen lamp should be easily accessible to the operator. 6. The Illuminator should have a build-in field diaphragm for Kohler illumination. 10. Eye piece tubes: Binocular eye piece tubes, inclined at 45 degrees, rotateable through an angle of 360 degrees, having inter-pupillary distance range of 54-74mm or wider, covering the above mentioned range. 11. Focusing Knob: Co-axial coarse and fine focusing knobs capable of smooth fine focusing movement over the full range of coarse travel. The fine focusing movement should have sensitivity of two microns or less (finer) over the entire coarse focusing stop safety arrangement should be provided. 12. General 1.All optical parts including objectives, eye pieces and prisms should have anti-reflective coating which also gives anti-fungal property. 2. All metallic parts should be corrosion-proof, acid-proof and stain-proof 3. Working manual should be provided with each microscope 4. A bottle of at least 25 ml immersion oil, a roll of lens tissue paper and lens cleaning solution (100 ml) should be provided with each microscope. 5. One no. of anti static cleaning brush should be provided with each Microscope for cleaning purpose. 13. Microscope should be supplied with spare parts as under :		

		• 100x oil immersion objective (as per the specifications given under B3) – one • Halogen bulb, (6volts, 20w) – 6 Nos. • Fuses – 6 Nos. 14. All consumables including microscope cover required for installation and standardization of system to be given free of cost. 15. The unit shall be capable of being stored continuously in ambient temperature of 0 -50 deg C and relative humidity of 15-90% 16. The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% 17. Power input to be 220-240VAC, 50Hz fitted with Indian plug. 18. Suitable voltage corrector/stabilizer 19. Should be FDA or CE or ISI approved product 20. User/Technical Maintenance manuals to be supplied. 21. Certificate of calibration and inspection from factory. 22. List of important spare parts and accessories with their part number and costing.		
2	Haemoglobinometer	Prismatic square tube type complete set in a box containing 20 disposable pippets, prismatic square tube and accessories for immediate testing and result and conforming to international accepted standards.		2
3	Haematocytometer	Latest model of Haematocytometer. Complete set confirming to internationally accepted tolerances/standards & trade practices.		2
4	ESR tube and glass ware	Type Wintrobe. Permanent graduated marks. 6-8 tubes, stable, aluminium, wintrobe tubes should fit snugly into the holes. It should not rock when kept on smooth surface.		2
5	Haematology analyzer	·WBC, RBC, HGB, HCT, MCV, MCH, MCHC, PLT, LYM%, MXD%, GRAN%, LYM#, MXD#, GRAN#, RDW CV, RDW SD, PDW, MPV, PCT and Histogram for RBC, WBC and PLT · It should be based on Electrical resistance for counting · SFT method for Hemoglobin · Sample volume should be 20ul for prediluted mode and 13ul for Whole blood.		1

		· Throughput: Up to 60 samples per hour. · Large colour display: resolution 800X600 · It should have the facility for data storage min 30,000 samples with histogram. · It should be close tube sampling facility. · Close tube sampling should have the facility for 4 position (QC 1.5 ml, 3 or 5 ml) · 2 RS 232 port is required. · Comprehensive QC program: L-J, X, XR and XB analysis. · QC should be up to 9 QC lot- 30 runs lot · Unique calibration program with fresh blood. · Membrane key facility should be there. · It should have the facility for in built printer with keyboard interface.		
6	Frozen section system/Cryostat	**Specifications:** Open top, heated sliding window, corrosion proof, stainless steel cryo chamber with good Fluorescent illumination. Cooling via two separate refrigeration system. Temp. of cryo chamber should be at least -30^{O}□c Facility for integrated peltier quick specimen freezing up to -45° C. Separate cooling should be adjustable up to -50 ° C. Temperature of the cryo chamber should be maintained within O□2^{O}□C of set temperature and maintained by hermetically sealed compressor system. Automatic programmable defrosting and manual defrosting should also be possible. Fully motorized microtome – movement controlled by manual as well as foot switch. Microtome should be encapsulated to support efficient spray disinfection. Microprocessor / Microcontroller based touch key control panel with LCD display for all functions including microtome Space for other specimen rack minimum 6 blocks . Removable section waste tray. Section thickness setting must be outside the cryo chamber. Disposable blade holder for low and high profile blades and Knife holder which		1

		can hold minimum 16 cm C type knife. Specimen holder can hold specimen size up to 70 x 50 mm.Facility for both 360° rotation as well as movement in X Y axis. Section thickness cutting 1-60 micro meter. Specimen retraction around 50 micron. Trimming in steps from 5 to 150 Microns Motorised coarse speed 500 micro meter /sec & 1000 micro meter / sec Control for number of sections. Cryo cabinet should be of appropriate size. Voltage - 220 -240 V, 50 Hz Essential Accessories should be quoted separately: 1. Microtome knife 160 mm. – 4 Nos. 2. Voltage stabilizer, block holder. 3. UPS for the above machine 4. Two bottle of low temperature oil. 5. High and Low profile blades – 5 packets each. 6. Specimen holder of appropriate size – 20 Nos. 7. Freezing compound at least 10 bottles 8. Glass ant- role device for knives and blades		
7	Colorimeter computerized	Microprocessor controlled instrument which automatically calibrates itself but has facility for manual calibration for specialist applications. Read out is via 20mm LED display. Wavelength Range : 340-800nm (extended) Selection : 8-gelatine filters on a switched wheel. Peak wavelength of 430, 470, 490, 520, 540, 580, 600 & 710nm. Optional drop-in interference filters extend range 340 to 800nm. Light source : Tungsten filament Size : 300 x 353 x 120 mm		1
8	Balance electronic 10 mg. Accuracy	Should have transparent case LCD Display Readability 10mg Should have internal calibration (automatic)		1

		Should have taring facility Levelling bubble Minimum warm up time		
9	Biochemistry Auto Analyzer (16 channel) with regents	· Multi parameter and discrete analyzer including electrolyte with computer and printer. · Capable of analyzing all routine bio-chemistry analysis including electrolytes (ISE –Module) · Throughput up to 320 test/hour, on 24 hours basis. · Capability up to 40 samples/run and up to 20 different at any one time · On board refrigeration for reagents. · Integrated computer system for data management and storage data. · Sample volume can be adapted to paediatric samples (micro analysis) · Calibration and maintenance requirement is minimum. · To be supplied with 90 Litre/hour multi-stage with 3 different grades of water (3 separate filter) and deionised. · Tests to be analyzed by pre-analyzer, LFT, liquids, total protein, calcium, posphorus, magnesium, amylase,, sodium, potassium, bicarbonate, chloride urea, creatine and glucose etc. · Battery backup minimum for 30 mins. · With complete accessories as cuvette, startup kit, consumables, cup 1000 etc.		1
10	Others: -Catheters & Disposables -General Glass ware For Lab.	1. <u>Ryel's tubes</u> • Adult / Paediatric • PVC • Sizes Paediatric F G 7-8 - Length - 50-52 cm Adult Sizes - FG 12, 14, 16, 18 Length - 100 – 105 cm		Lot

		Sterilized Gamma Radiation / ETO Individual double packing Qty. : 6 (six) of each size. 2. <u>IV Cannulas</u> PTFE catheter with Wings • Colour coded different sizes • Needle sharp bevelled • Sizes 12, 14, 18, 20, 24 gauge • Packed in a Blister pack with peel open facility • Presterilized ETO / Gamma Qty. : 12(twelve) of each size. 3. <u>Catheters</u> a) Urinary Plain Material Indian Rubber Sizes 6, 8, 10, 12, 14, 16 Quantity six of each size. b) Foley's Catheter • Two way • Material Latex • Individually packed • Presterilized ETO/ Gamma • Sizes 10, 12, 14, 18, 20, 22 Quantity six of each sizes. c) Malecot' s Catheter Material Indian Rubber Sizes 10, 14, 18, 22, 24, 28, 30 Quantity 6 of each size d) Rectal Catheter • Material Indian Rubber		

		• sterlised • Adult and child size • Six packets of adult and child sizes. e) Corrugated Drainage Tubes Material PVC Individually packed Size 1- 1.5" 6-8" Preterilised ETO / Gamma Radiation Qty. : 12(twelve). f) Infusion Set adult - Qty.100. Adult with Murphy's chamber and flow regulator individual packed, double packing Presterilized with Gamma / ETO g) Chest Drainage Catheters Material PVC Sizes 20, 24, 26, 30 Individually packed , single use Presterilized ETO/ gamma Radiation Quantity six of each h) Scalp Vein Single use Presterilized , individually blister packing Sizes 18, 20, 21, 22, 23, 24, 26 gauge Quantity six of each sizes i) Infusion set – Pediatric with chamber and Floater : Qty.100. Capacity of chamber 100 cc Double packing Presterilized ETO/ Gamma Radiation j) Blood transfusion sets Regulator with Murphy, chamber, and single use,		

		double packing Presterilized ETO/ Gamma Radiation k) Suction catheters Material PVC Single use Sterilized ETO/Gamma Radiation Sizes 6,8,10,12,16,18 FG. Quantity 12 of each size L.) Urine collection bag a) Adult : (100 nos.) Capacity : 2000 cc Prestrilized ETO/ Gamma Individually packed b) Pediatric (100 nos.) Capcity 500ml Pressurize ETO/ Gamma Individually packed M) Surgical Gloves Material Latex Sizes 6 ½ , 7 ½ , 6 Double packing, single use Presterilised ETO/ Gamma Radiation 25 dozens of each size N) Endotracheal Tubes High volume, Low pressure cuff Pilot Balloon with semi directional value. Individually paked Presterilized ETO / Gamma		

		Sizes 3.0 mm to 5 mm, uncuffed 5.5 to 8 mm cuffed Quantity 4 of each size **General Glassware for Lab.** -Microslides. Size 75x25mm, Good quality. 500nos. -Heamatocyte tubes with stand. Good quality, permanent marks. 24 nos. -Capilary tubes for clotting time. 500no. -Test tube Corning :small 10mmODx75mm. 48nos. :medium 15mmODx150mm. 48nos. :large 25mmODx150mm. 48nos. -Micropipettes, graduated. Capacity 0.1ml, 1ml, 10ml. Qty. 10 each. -Petridesh-small, medium, large with cover. Qty. 25 each -Stamming Jars for microslides, 6nos. -Stamming Racks for microslides, 6nos. -Volumetric flask-Glass Boris. Round bottom, conical shape. Capacity 500ml. Qty. 24nos. -Reagents bottles-Borosil. Capacity 500ml. Qty. 24nos. -Reagents bottle screw top, glass borosil, capacity 50 ml. -Centrifuge tubes-Glass Borosil. Capacity 15ml, 25ml, with marks. 24 each. **Proctoscope Set** Material Stainless Steel Diameter 2-3 cms Length 10 cms Set of three sizes in a wooden Box. **Cervical Dilator Set**		

		Makeness Stainless steel Type Hegar, Double enclosed Set of height Sizes 1 x 2 mm 3 x 4 m 5 x 6 m 7 x 8 m 9 x 10 m 10 x 11mm 12 x 13m 13 x 14mm 15 x 16 m To be supplied in a wooden velvet livid Box		

Annexure A : Specification for Supplies

Package Ten : General Laboratory Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Deep Freezer (-) 70 deg. C	Ø **Description of function** o Deep freezers are required to preserve blood and blood products, vaccinations etc at specified temperature. Ø **Operational Requirements** o Internal minimum capacity (500 litres)net at least double door with adjustable at least :3 shelves o Range up to -65deg.C to -80deg.C (adjustable) o Vertical Cabinet (upright mode) Ø **Technical Specifications** o Construction: Solid rust free cabinet to prevent corrosion and lockable castor wheels. Inner surface should be stainless steel. o Control System: Micro-processor based temperature controller with digital temperature display LED/LCD with seven days graphic temperature recorder with rechargeable battery backup including charger maintenance free and insensitive to vibration. Details of battery and battery charger shall be indicated. o Refrigeration System: Heavy Duty refrigeration system, maintenance free, below -85deg.C (±1deg.C) with hermetically sealed dual compressor, noise free and vibration free, air cooled with security lock to prevent unintentional switch off shall be supplied. It should have maximum cooling time of 5 hours at maximum ambient temperature of 33deg.C. o Alarm: It should also have audio visual Electronic Alarm System independent of power supply.		1

		o Insulation: High density polyurethane or equivalent Gaskets – Double seal silicon. o Door heating system for easy opening of door. o Availability of spares / disposable for at least 10 years. o All consumables required for installation and standardization of system to be given free of cost. Ø **Environment factors** o The unit shall be capable of operating continuously in ambient temperature of 10 – 400C and relative humidity of 15-90%. o The unit shall be capable of being stored continuously in ambient temperature of 0 – 500C and relative humidity of 15-90%. Ø **Power Supply** o Power input to be 220-240V AC, 50Hz, / 440V 3 Phase as appropriate fitted with Indian plug. o Resettable over current breaker shall be fitted for protection. should be supplied with 3kva onlin UPS. Ø **Standards and Safety** o Should be FDA or CE or ISI approved product. o Electrical safety conforms to standards for electrical safety IEC-60601/ IS-13450.		
2	Water bath	1. **Description of Function** 1.1 Water bath maintains a constant preset temperature for treating samples. 2. **Operational Requirements** General purpose water bath is required. 3. **Technical Specifications** 3.1 Small (app dimensions 40-45x35-40x20-25 cms) light, stainless steel body		2

		3.2 Microprocessor controlled programmeable, digital display for temperature etc. 3.3 Temp. Range 37^0 C to 56^0 C + 50^0 C 3.4 Should have a stirrer for circulation 3.5 Bath Capacity: 8-10 litres. 4. **System Configuration Accessories, spares and cosumables** 4.1 System as specified.. 5. **Environmental Factors** 5.1 The unit shall be capable of being stored continuously in ambient. Temperature of 0 -50 deg C and relative humidity of 15-90% 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% 6. **Power Supply** 6.1 Power unit to be 220 -2 40 VAC, 50Hz fitted with Indian plug 6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications, (Input 160-260 V and output 220-240 V and 50 Hz). 7. **Standards, Safety and Training** 7.1 Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450 7.2 Should be FDA, CE, UL or BIS approved product. 8. **Docuumentation** 8.1 User/Technical/Maintenance manuals to be supplied in English 8.2 Certificate of calibration and inspection. 8.3 List of important spare parts and accessories with their part number and costing.		

3	Centrifuges	1. **Description of Function** 1.1 The Refrigerated Centrifuge (RC) is a mechanical device used to separate biological substances of differing densities. 2. **Operational Requirements** 2.1 Programmable microprocessor control system with self-diagnostic feature. 3. **Technical Specifications** 3.1 Maximum speed : Approx. 4,000 rpm Swing –out / 14,000 rpm Angle. 3.2 Maximum RCF: 3,000 x g Swing-out/ 18000xg Angle 3.3 Maximum capacity: 4 x 200 ml Swing-out / 24 x 1.5/2 ml Angle 3.4 Temperature range: -10^0C/ + 40^0C 3.5 Digital displays for Programme No, temperature, Speed, RCF, & Time 3.6 Timer 1-99 minutes and hold position 3.7 At least 5 acceleration / 5 braking rates. 3.8 Maintenance free induction motor. 3.9 Totally CFC free refrigerant fluid and insulation. 3.10 Angle Rotor: 24 x 1.5 /2.0ml, with adaptor for 200/500/800microlt 3.11 Angle Rotor: 30x1.5/2.0ml, with adaptors for different sizes. 3.12 Swing-out Rotor: 4 x 200ml with sealing cap and adaptors for different sizes. 4. **System Configuration Accessories, Spares and Consumables** 4.1 As specified. 5. **Environmental Factors** 5.1 Shall meet IEC-60601-1-2: 200 (Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility. 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90%.		1

		5.3 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 6. **Power Supply** 6.1 Power input:220-240V/ 50Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets. 7. **Standards, Safety and Training** 7.1 Should incorporate Safety Features for Imbalance detection, lid interlock, over temperature , rotor over speed etc. 7.2 Electrical safety conforms to standards for electrical safety IEC-60601/IS-13450. 7.3 Should be FDA or CE approved product. 7.4 Should comply with IEC/TR 61010-3-020: Safety requirements for electrical equipment for measurement, control, and laboratory use –Part 3-020: Conformity verification report for IEC61010-2-020:1992 Particular requirements for laboratory centrifuges". 8. **Documentation** 8.1 User manual in English. 8.2 Service manual in English 8.3 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out. 8.4 Certificate of calibration and inspection. 8.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service/technical manual. 8.6 List of important spare parts and accessories with their part number and costing. 8.7 Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original		

		catalogue/ data sheet. Any point, if not substantiated with authenticated catalogue/ manual, will not be considered.		
4	Incubators	**Description of Function** Incubator is a closed chamber which heats/chill a sample at a preset temperature for long term for applications like culture growth etc. **Operational Requirements** Microprocessor/Microcontroller/Microcomputer controlled system. **Technical Specifications** • Capacity: 120 L • Interior chamber: Stainless steel for easy cleaning and decontamination • Timer: 1 min. to 100 hours and hold position • Minimum turbulence and no cross contamination • Adjustable safety thermostat for temp setting at 1 deg C increment • Temp Accuracy +/-1% of required temp, with inbuilt Temp.Sensor • Internal glass door for the observation • With minimum two adjustable shelfs • Audiovisual Alarm to Indicate when temperature deviates more than 1°C from setpoint, and when program or time has finished. Alarm may be muted. • Peltier heating with continuous air circulation and Heating by natural/forced convection for homogenous temperature distribution • Temperature range: +5° C to 80°C • There should be a Membrane Keypad with LCD/LED to set and display operating parameters, current status, running time and alarm conditions for time and temperature. • Interior lighting facility, insulated door fitted with heavy hinges handle locking, mechanical door lock. **Environmental factors** • Shall meet IEC-60601-1-2 :2001(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.		1

		• The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% • Thu unit shall be capable of operating in ambient temperature of 20-30 deg C and relative humidity of less than 70% **Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian plug • Suitable Servo controlled Stabilizer/CVT • Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system. • Resettable overcurrent breaker shall be fitted for protection **Standards, Safety and Training** • Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 • Should be FDA , CE,UL or BIS approved product **Documentation** • User/Technical/Maintenance manuals to be supplied in English. • Certificate of calibration and inspection. • Log book with instruction for daily , weekly, monthly and quarterly maintenance checklist. • The job description of the hospital technician and company service engineer should be clearly spelt out • List of important spares and accessories with their part number and costing. • List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service / technical manual. • Compliance Report to be submitted in a tabulated and point wise manner clearly mentioning the page/para number of original catalogue/data sheet. Any point ,if not substantiated with authenticated catalogue/manual, will not be considered.		

5	Hot air oven	1. **Description of function** 1.1 Hot Air Oven is required for heating a sample under controlled conditions. 2. **Operational Requirements** 2.1 Microprocessor based system with PID-temperature controller with integrated auto diagnostic system with fault indicator. 2.2 Thermostatically controlled system. 3. **Technical Specifications** 3.1 External: Stainless Steel Casing :wxhxd: (All dimensions will have a tolerance of +/-5mm). Insulated stainless steel door with locking and rear zinc-plated steel. 820 x 595 x580mm 3.2 Interior – w x h xd: (all dimensions will have a tolerance of 5mm) easy-to-clean interior, made of stainless steel, with supports on the three sides for three adjustable perforated stainless steel shelves.450 x 475 x450 mm,97 litres 3.3 Forced air circulation by quiet air turbine/Fan to ensure uniform temperature. 3.4 Fitted with load indicator and safety thermostat take over indicator lamp. LCD/LED Indicator. 3.5 Temperature Variation +/-1 deg C. 3.6 Temperature Range – ambient to 250 deg C. 3.7 Output available for data acquisition. 3.8 Should be incorporated with malfunction monitor 3.9 Should have two or more air exhaust vents. 3.10 Should be incorporated with see through window with reinforced triple glass window. 4. **System Configuration Accessories, Spares and Consumables** 4.1 System as specified. 5. **Environmental factors** 5.1 The unit shall be capable of being stored continuously in ambient		2

		temperature of 0-50 deg C and relative humidity of 15-90%. 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%. 6. **Power Supply** 6.1 Power input to be 220-240 Ac, 50Hz fitted with Indian plug. 6.2 should incorporate with online UPS(1kva) 7. **Standards, Safety and Training** 7.1 System should cofirm to IS:6365-1971 (Reaffirmed 1995) with latest amendments in ISI specifications for laboratory Electric Ovens. Alternatively system should be FDA Approved or CE Certified. 7.2 Electrical safety conforms to standards for electrical safety IEC-60601/ IS-13450. 8. **Documentation** 8.1 User/Technical/Maintenance manuals to be supplied in English. 8.2 Log book with instruction for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out. 8.3 List of important spare parts and accessories with their part number and costing. 8.4 Certificate of calibration and inspection. 8.5 List of Equipments available for providing calibration and routine maintenance support as per manufacturer documentation in service/technical manual.		
6	BOD incubator	· Stainless steel make, full length inner plexi-glass door. · Castor wheel mounted tie easy movability. · CFC free High efficiency refrigerator system mounted at bottom, proper air circulation for uniformity.		1

		· Temperature Range: 0.1degC resolution:(-10 deg Celsius to+60 deg Celsius) · Temperature Control: Digital Control, · Micorprocessor based controller for mains, heating, and cooling with separated indicator lights. · Accuracy of Temperature: + 0.5degC · Power:230 volts, 50Hz AC, Mains single phase. · Size: :700 x 580 x 1018 mm.4.3 cu ft · 3 shelfs, made of stainless steel · Inner illumination with sleek fluorescent tubes. ·, online UPS:3kVA · Remarks The apparatus should confirm to Indian Standard Institution Guidelines with latest amendments inIndian Standard Specification for Incubators or equivalent National or International Standards covering Markings, tests and Safety requirements Voltage regulators of appropriate rating to be included for each item to cope with 160-260 V.		
7	Autoclave vertical type	• Description of Function: Steam Sterilizers or Autoclaves are required to sterilize objects under high temperature and pressured steam. • Fabric, Instrument, BD test, Liquid, Rubber & Gloves, Flush, Gravity, User-de-fined. • Technical Specifications:- Ø Single door high pressure steam sterilizer with in built steam generator Ø Material of construction: **a.** Sterilizer chamber SS 316 **b.** Door SS 316 **c.** Jacket SS 316 d. Fittings: Analogue Pressure Gauge (Jacket & Chamber - On the front panel) Digital Temperature display (On the front panel) **e.** Loading carriage SS 316 **f.** Transfer trolley: MS, painted		1

		g. Door Gasket: Silicon or better Ø Chamber capacity 140 -160 L Ø Chamber Dimension : 1000 x 410 x 410 mm (L x W x H) Ø Input Power : Note less than 24 KVA Ø Water Level indicator in front side Ø Vacuum Cycle :Shoudl consist of a mnimum of three vaccum pulses each reaching a pressure of less than 150 mbar. Ø Vacuum Pump : Should be capable of evacuation to an absolute pressure of less than 100 mbar Ø Printer : In-built Ø Sterilizer should be provided with steam generator Ø Spring loaded safety valves and automatic vacuum breaker for jacket Ø Safety valve protection against poor pressure. Ø Safety lock for door :pressure lock safety device Ø Low water off • System Configuration Accessories, spares and consumables: Ø System as specified- Ø Should provide available spares and consumables for at least 10 years Ø Should provide a sufficient quality of consumable along with the equipment • Power Supply: Power input to AC 380 V, 50 Hz 3 Phase • Standards and Safety: The Sterilizer should be requirement of state GB 18278-2000 and the related American FDA standard and European EN 285, 97/23/EC standard. • Documentation: Ø User/Technical/Maintenance manuals to be supplied Ø List of important spare parts and accessories with their part number and costing.		
8	Bunsen burners with LPG pipe line	**Description of Function** • A small laboratory burner consisting of a vertical metal tube connected to a gas source and producing a very hot flame from a mixture of gas and air		1

		let in through adjustable holes at the base **Operational Requirements** • Suitable for operation with LPG and piped Natural Gas, confirming to international / national specification • Designed with a flame stabilizer to provide a steady flame for general laboratory needs **Technical Specifications** • Should be based on sensor technology, the flame ignites in a non-touch mode. Unintentional ignitions should not happen; the reaction range of the infrared sensor should be clearly defined • Should operate in three modes: Foot switch: This ignites the instrument only when the foot switch is activated. Flame stays on for as long as the foot switch is pressed down. Continuous: The duration of burning – between 10 and 60 minutes – is regulated via a timer. Sensor: The sensor window registers your hand movement when it passes 6-8 cm in front of the window and then the flame is automatically ignited **System Configuration Accessories, spares and consumables** • Series-fitted with nozzles for LPG and piped Natural Gas • Compatible regulator and hoses should be supplied. **Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90%		

		• The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90% **Power Supply** • Rechargeable battery operated system. Charger to be provided if integrated charger is not there **Documentation** • User/Technical/Maintenance manuals to be supplied in English. • Certificate of calibration and inspection. • List of important spare parts and accessories with their part number and costing. • Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.		
9	Distillation plant 3 L/hrs. Capacity	**Description of Function** • Required for distilled water production for lab. **Operational Requirements** • Double distillation plant with stand not wall mounted and approx. 5 – 10 litres/ hour output. • Instant distilled water flow should be there • Easy to operate, durable, safe for routine use. **Technical Specifications** • Quartz distiller, Demountable boiler • Panel box and stand to accommodate regulator and electrical supply, clamps etc • Quality of distillate – pyrogen free, PH- 6.9- 7.0.High purity, low conductivity. • Distilled water should be heavy metal, salts, pyrogon and iron free.		2

		• Specific Conductivity at 25 deg C less than 0.4 x 10-6S/cm • Glass material (or chemical inert material) • Equipment should be thermal shock proof. • Gas vent should be there to remove volatile impurities leaving the condensate free from gaseous impurities • Automatic low water cut off. • Tubing should be made up of good quality rubber (heat resistant). • Wiring of the equipment should be enclosed in Case. • It should have deconcentrator a bleeder device on the evaporation that constantly removes a part of the boiling water from it so that the cumulative concentration of non volatile impurities in the water is prevented **System Configuration Accessories, spares and consumables** • All consumables required for installation and standardization of system to be given free of cost. **Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% **Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian plug • Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz) • Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system.		

		Standards, Safety and Training • Should be FDA , CE,UL or BIS approved product **Documentation** • User/Technical/Maintenance manuals to be supplied in English. • Certificate of calibration and inspection. • List of important spare parts and accessories with their part number and costing.		
10	Auto washer pipette	Made of stainless steel. Size-22"-24" H Diameter: 5"-6" Removable pipette holder. Mode heat wash. To work on 220V, 50Hz.		1
11	Hot plate	1. **Description of Function** 1.1 Hot plate is required for recording reaction time mice to heat stimulus. The Cold Plate Test is useful in studying the traditional cold receptors. 2. **Operational Requirements** 2.1 System required with complete accessories and PC connectivity facility. 3. **Technical Specifications** 3.1 Heating Plate > 4mm thick of electrocytic copper sheet. 3.2 Reaction time display in 0.1 second increment. 3.3 Solid –state temperature regulation with LCD graphic display of temperature in 0.1 degree C (scale range from 2 deg C to60 deg C). 3.4 Dedicated Data Acquisition Software Package. 3.5 The Experimental data can be directly exported to the PC USB or serial ports. 4. **System Configuration Accessories spares and consumables.** 4.1 As specified. 5. **Environmental Factors** 5.1 None.		2

		6. **Power Supply** 6.1 Power input to be 220-240VAC, 50Hz fitted with Indian plug. 6.2 Suitable Automatic Voltage regulator/stabilizer meeting ISI specifications should be supplied. 6.3 Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system. 8. **Documentation** 8.1 User /Technical/Maintenance manuals to be supplied. 8.2 Certificate of calibration and inspection from factory.		
12	Refrigerators	1. **Description of Function** 1.1 Laboratory Refrigerator is used to store samples, medicines, blood bags etc. under controlled temperature. 2. **Operational Requirements** 2.1 system required with weekly chart recorder and digital displays. 2.2 Capacity of storage: 300 litres or more. 3. **Technical Specifications** 3.1 Temp range-should have adjustable temperature control range from +1 degree to +8 degree C, factory preset at 4 degree C. 3.2 Refrigerator System a) The system should have density CFC – free urethane foam insulation to protect cabinet from ambient temperature fluctuation. b) The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recovery +/-1 deg.C. c) The system should have sensors for activating automatic defrost cycle to minimize the frost build up. d) The system should have automatic condensate removal with no requirement for separate drainage lines. 3.3 Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least 1 mm thickness. 3.4 Internal Temp Control a) System should have temperature control range from +1		2

		degree C to +8 degree C. b) Temperature control resolution should be better than 0.1 degree C. c) Cooling down time of max of 150 min on half load. 3.5 External ambient temp should perform in ambient temp up to +43 degree C. 3.6 Door System should lockable double glass doors for better safety. 3.7 Safety System: a) System should have large and clear Digital displays for the set/run parameters. b) The system should have weekly chart recorder to record temperature charges with battery back up. c) The system should have key operated set point for the added security. d) Battery Charger should be provided with details of battery No.: V:AH. 3.8 Alarms: a) System should have audible/visual warnings for over-temperature under temperature and power failure with visual status reports on critical functions. b) System should have battery backup and connections for remote alarm contacts. 3.9 Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base. 3.10 Scratch resistant internal lining of the cabinet (stainless steel or aluminium). 3.11 Should have 5-6 rolled out type drawers of stainless steel of 22 G. 4. **System Configuration Accessories, spares and consumables** 4.1 System as specified.		

		4.2 Quote pricing for the following essential spares; (01 each) Compressor; Evaporator; Evaporator fan motor; Condenser fan motror; Filter drier; Condensate heater; Service valve; Control unit; Transformer; Thermostat; Lamp; Contactor; Relay; Relay base; Door switch; door gasket 5. **Environmental Factors** 5.1 The unit shall be capable of being stored continuously in ambient temperature of 0-50 deg C and relative humidity of 15-90%. 5.2 The unit shall be capable of operating continuously in ambient temperature of 10 -40 deg C and relative humidity of 15-90%. 6. **Power Supply** 6.1 Power input to be 220-240 VAC, 50Hz fitted with Indian plug. 6.2 Voltage corrector/stabilizer of appropriate ratings meeting ISI specifications. (Input 160-260 V and output 220-240 V and 50 Hz). 7. **Standards, Safety and Training** 7.1 Should be FDA, CE, UL or BIS approved product. 7.2 Electrical safety conforms to standards for electrical safety IEC-60601/ IS-13450. 8. **Documentation** 8.1 User / Technical/ Maintenance manuals to be supplied in English. 8.2 Certificate of calibration and inspection. 8.3 List of Equipment available for providing calibration and routine maintenance support as per manufacturer documentation in service/ technical manual. 8.4 List of important spare parts and accessories with their part number and costing. 8.5 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job description of the hospital technician and company service engineer should be clearly spelt out.		
13	De-ioniser	Electronic controlled programmable with LCD to view water conductivity, Water temperature and time dispensed in minutes		1

		Flow rate upto 60 litres/hr Resin and salts for water softening Cartridge to remove solids by 5 micron filter, activated carbon catridge, organic Adsorption cartridge Ultraviolet reactor Booster pump 70-80 ltr. Water storage tank Dispensing gun.		

Annexure A : Specification for Supplies

Package Eleven : Dental Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	**Dental Chair Unit**	Electrically operated multi programmable chair Fitted with multi-functional foot control aid Operating light with two intensity Auto water connection for spittoon & tumbler High & Low vacuum motorized suction with flow control valve Auto drain & auto flush system. Two airotor points with one fibre optic twin beam Ultrapush QD twist free coupling having non Retraction valve airotor hand piece. One mini clean Head hand piece. Transparent water booster Brushless micromotor with one contrangle hand piece & one straight hand piece Two 3 way syringes Ultrasonic scaler (OEM) unit with tree scaling tips, One ENOD chuck, 30 ENDO files & two periodontal tips Light cure unit with variable intensity Stainless steel instrument tray X-ray viewer		1

		Oil free medical grade monobloc 0.75 HP Airotor air compressor with imported head Unit mount dental X-ray 70 KV (tube head, imported) Autoclave fully programmable digital type Dental operator's stool with backrest movement and hand rest.		

Annexure A : Specification for Supplies

Package Twelve : Blood Bank Equipment

Nr	Equipment and Instrument	Specification	The most appropriate answer	Required Number
1	Blood bank refrigerator	**1. Description of Function** Blood Bank Refrigerator is used to store blood bags under controlled temperature. **2. Operational Requirements** System required with weekly chart recorder and digital displays. **3. Technical Specifications** Temp range-should have adjustable temperature control range from +1 degree to +8 deg.C, factory preset at 4 degree C. Capacity should accommodate 350 or more unit's blood and storage internal volume should be 700 liters. <u>Refrigerator system-</u> a)The system should have high density CFC- free urethane foam insulation to protect cabinet from ambient temperature fluctuation. b)The system should have positive, forced, air circulation to maintain temperature uniformity at all shelf levels, with quick recover +/-1 deg.C. c)The system should have sensors for activating automatic defrost cycle to minimize the frost build up. d)The system should have automatic condensate removal with no requirement for separate drainage lines. e)Internal construction should be made up of high grade stainless steel (min 22 G) External construction Corrosion resistant sheet at least 1mm thickness.		2

		Internal Temp Control a)System should have temperature control range from +1 degree C to +8 degree C. b)Temperature control resolution should be better than 0.1 degree C. c)Cooling down time of max of 150 min on half load. External ambient temp should perform in ambient temp up to +43 deg.C. Should have connectivity to computer and data logger. Door System should lockable double glass doors for better safety. Safety System: a)System should have large and clear Digital displays for the set/run parameters. b)The system should have weekly chart recorder temperature changes c)The system should have key operated set point for the added security. Alarms. a)System should have audible/visual warnings for over-temperature under temperature and power failure with visual status reports on critical functions. b)System should have battery backup and connections for remote alarm contacts. c)Should have connectivity to computer and data logger. Should have adjustments for uneven bases. The adjustments should be easy to use like rotating a screw at the legs in the base. Scratch resistant internal lining of the cabinet (stainless steel or aluminium). **4. System Configuration Accessories, spares and consumables** System as specified Quote pricing for the following essential spares; (01 each) Compressor; Evaporator; Evaporator fan motor; Condenser fan motor; Filter drier; Condensate heater; Service valve; Control unit; Transformer; Thermostat; Lamp; Contactor; Relay; Relay base; Door switch; Door gasket. **5. Environmental factors** The unit shall be capable of being stored continuously in ambient temperature f 0-		

		50 deg C and relative humidity of 15-90%. The unit shall be capable of operating continuously in ambient temperature of 5 to 45 deg C and relative humidity of 15-90% **6. Power Supply** Power input to be 220-240VAC, 50Hz Voltage corrector/ stabilizer of appropriate ratings meting ISI Specifications . (Input 160-260V and output 220-240 V and 50Hz). Suitable Automatic Voltage regulator/stabilizer meeting ISI Specifications should be supplied. Broad specifications are: Automatic Type Input 150-280V, Output 220V +/ -7%, 50Hz, Single phase, AC with automatic 2-4 sec Cut off and 6-9 minutes restart delay. Quick start arrangements for by passing the start delay. Suitable MCB on input voltmeter and indicators on Front Panel. Input Power Cable with 15 A Plug and six way output terminal strip for two outlets. **7. Standards and Safety** Should be FDA, CE, UL or BIS approved product. Should comply with WHO/ UNICEF Specification Reference: BTS/RF.1 Test and inspections as per WHO Procedure reference: Laboratory Test Procedure: Standard Test Procedure: BTS/ Proc/ 3. Should comply with International Electromagnetic Compliance standards like IEC or EMC Directives. Electrical safety conforms to standards for electrical safety IEC-60601/IS13450. 8. **Documentation** -User/ Technical/ Maintenance manuals to be supplied in English. -Certificate of calibration and inspection from factory.		
2	Eliza reader	**Description of Function** • ELISA Reader is required to Read the Color Density known as OD(Optical		1

		Density) in ELISA (Enzyme Linked Immuno-Sorbent Assay.)Plates. **Operational Requirements** • ELISA Reader complete with Printer is required. **Technical Specifications** • Should have 8-12 measuring channel & reference channel • Should have wave length range of 400- 750 nm with 6 filter 340, 405. 450, 492, 540, 620nm with provision for fitting any additional filters • Should have an absorption range of 0-4.000A • Should have a resolution of 0.001A • Should read within 6-8 seconds • The control panel should have soft colored touch screen display/easy to use multifunctional keyboard .Results should be readable on screen or be printed out using on board printer. • Should have external & internal programmable time & speed shaking • Should be able to read all types of plates • Should have a single halogen lamp with save features as light source • Should allow user defined programmes, 30 or more. • RS232/USB output for Printer, PC connectivity and Data acquisition should be there • Should have data memory of 300 plates. • Should have external printer, capable of printing complete results & graphs etc. from Elisa system **System Configuration Accessories, spares and consumables** • Halogen Lamps : 2 • Thermal print paper : 10 Rolls/Z Fold • Dust Cover -01 • Set of pipettes consisting of single channel variable volume color pipettes 0.5-10 ul, 5-40 ul, 40-200 ul, 200-1000 ul		

		• 8 channel variable volume color multi channel pipettes 5-50 ul and 50-300 ul. **Environmental factors** • The unit shall be capable of being stored continuously in ambient temperature of 0 -50deg C and relative humidity of 15-90% • The unit shall be capable of operating continuously in ambient temperature of 10 -40deg C and relative humidity of 15-90% **Power Supply** • Power input to be 220-240VAC, 50Hz fitted with Indian plug • Resettable overcurrent breaker shall be fitted for protection • Voltage corrector/stabilizer of appropriate ratings meeting ISI Specifications.(Input 160-260 V and output 220-240 V and 50 Hz) • Suitable UPS with maintenance free batteries for minimum one-hour back-up should be supplied with the system. **Standards and Safety** • Comprehensive training for lab staff and support services till familiarity with the system. • Should be FDA , CE,UL or BIS approved product **Documentation** • User/Technical/Maintenance manuals to be supplied in English. • Certificate of calibration and inspection from factory		
3	Donation couch	**1 Description of Function** 1.1 Blood Donor Couch is a completely automatic enveloping, variable		2

	tilt chair and specially designed to make blood withdrawals easier, safe and functional, and also for other diagnostic and therapeutic areas

2 Operational Requirements

2.1	1) Provides a comfortable position for the donor. 2) Variable positioning for either arm with Comfortably wide arm-rests. 3) Arm rests have swinging out as well as up and down moving facility. 4) Reclining and upright body positions with a smooth shifting to any position. 5) Both sides should have supporting brackets. 6) If a vasovagal attack occurs the Donor's head needs to be lowered immediately and his legs lifted above his heart level so that blood can flow back to the brain and other vital organs. Electronic remote controlled facility should be provided for this function

3 Technical Specifications

3.1	Ergonomically designed comfortable chair type for donor comfort. Mattress should be comfortably cushioned with elegantly thick washable upholstery.
3.2	Seat, back rest and leg rest size designed for donor comfort. It should have step less electric remote controlled height adjustment approximately 58 – 60 cm.
3.3	Adjustable arm rests-Swivel able and lift up for donor’s comfort and phlebotomist friendly
3.4	Easily tilted to head low position, electrically operated
3.5	Comfortable working level for the operator. Lifting capacity - Approx

	200 kg.
3.6	UP/DOWN control

4 System Configuration Accessories, spares and consumables

4.1	Donor Couch -01
4.2	Dust Cover -01
4.3	Power cable -01
4.4	Arm Rests(pair) -01 pair
4.5	Remote control -01

5 Environmental factors

5.1	The unit shall be capable of operating continuously in ambient temperature of 10 -40 C and relative humidity of 15-90%
5.2	The unit shall be capable of being stored continuously in ambient temperature of 0 -50 C and relative humidity of 15-90%
5.3	Shall meet IEC-60601-1-2 :200(Or Equivalent BIS) General Requirements of Safety for Electromagnetic Compatibility.

6 Power Supply

6.1	Power input: 220-240V/ 50 Hz AC Single phase or 380-400V AC 50 Hz Three phase fitted with appropriate Indian plugs and sockets.
6.2	Reset table over current breaker shall be fitted for protection
6.3	Suitable Servo controlled Stabilizer/CVT

7 Standards and Safety

		7.1 Should be FDA or CE approved product 7.2 Electrical safety conforms to standards for electrical safety IEC-60601 / IS-13450 7.4 All electrical actuators and mechanisms should be housed inside the structure making the product safer **8 Documentation** 8.1 User manual in English 8.2 Service manual in English 8.3 Certificate of Calibration and inspection from the factory 8.4 Log book with instructions for daily, weekly, monthly and quarterly maintenance checklist. The job descriptin of the hospital technician and company service engineer should be clearly spelt out.		
4	Antisera kits, Binoculars microscope, testing plates, glass ware etc.	**A) Blood Grouping Sera/Reagents** • Antisera to blood group A, B & D -10 Sets with known control sera • Testing Plates -04 Nos. • Lancets-200 B) Reagents for serological tests for syphillis and positive sera for control. Elisa tests kits for hepatitis and HIV I & II.-10each C) Binocular Microscope for specifications refer under Clinical Pathology D) Glass Ware for Blood Bank — No. Pippetes (Pasture) — 10 Serological graduated pippetes of capacity 0.1ml, 1ml & 10ml. — 10 of each size Glass Tubes 6mm x 50mm — 100 Racks for the above test tubes — 6 Filter paper (Whatman) — 12		1

		Glass Micro slides 75mmx25mm 6 boxes of 100 E) Serological Water Bath – Digital display of various settings of temp., timer. Temp. range from 37deg.C to 90deg.C. Size approx. 300x250x170mm. Inner-stainless steel. Outer-M.S. epoxy coated. F) Table top centrifuge for four tubes with 24 tubes to be supplied. G) Analytical balance of 10mg accuracy. H) VDRL shaker – With digital speed controller, timer & power indicator to work on 220v, 50Hz.		

Annexure B: Price Schedule Form

B- 1 : Price Schedule for Supply and Installation Nursery Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Baby basinet	4				
2	Open care system	5				
3	Phototherapy unit	2				
4	Baby warmer unit	2				
5	Infant weighing machine	1				
6	Infant meter	1				
7	Infant Staid Meter Paediatric	1				
8	Instruments for skin graft I. Electric dermatome II. Zimmer mesher III. Watson skin graft knives	1 each				
9	Wash Tub	1				
10	Set of Surgical Instruments	2				
11	Computerized spirometer system (PFT)	1				
12	Infant Incubator	1				
13	ENT Diagnostic and Treatment Unit	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - …… Fax Number - ……

Date ……/ ..…/ 2015

B- 2 : Price Schedule for Supply and Installation ICU Instrument & Devices

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Blood gas and Na+/K analyzer	1				
2	Suction machine (Heavy duty)	2				
3	Head light with light source	1				
4	SYRINGE PUMPS	1				
5	Blood gas with electrolyte analyser	1				
6	Electrolyte Analyzer	1				
7	Auto Blood Gas Analyzer	1				
8	Digital infusion Pump	10				
9	Aponea monitor	1				
10	Bilirubinometer (Transcutaneous Serum)	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..../ 2015

B- 3 : Price Schedule for Supply and Installation Neonatal ICU, ICU & Surgical Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Multi channel ECG machine (12-channel)	5				
2	Multi-parameter with capnometer	4				
3	Basic Monitor-Neonatal (Resp., Temp., Pulse, SPO2)	3				
4	Pulse Oximeter	3				
5	Oxygen Concentrator (Portable)	1				
6	Bronchoscope (Rigid) with Accessories with Light Source	1				
7	Ultrasonic Nebulizer	5				
8	Suction Machine	6				
9	Ventilator (Infant Paediatrics & Adult)	7				
10	Adult Therapeutic UGI Video Endoscope System	1				
11	Laparoscopic Cholecystectomy Set	1				
12	Set of General Orthopedic Instruments	1				
13	Hysteroscope Set with Resectoscope	1				
14	Diathermy/Electrosurgical Unit	6				
15	Bronchoscope Fiber-optic with Accessories	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if

applicable)
Total amount in words; Sri Lankan Rupees
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Signature of the Bidder ……
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(Common Seal of the Company)
Name & address of the Company -
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Name address of the Authorized Officers: ……..……
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Telephone Number - ……. Fax Number -
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Date ……/ ..…/ 2015

B- 4 : Price Schedule for Supply and Installation Obstratic & Gynecology Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Ultrasound with facility & Color Doppler +3 Probs	**1**				
2	Spot light for gynae exam.	2				
3	Vaginal speculum Dual	3				
4	Dressing Drums	6				
5	Obstetric forceps – Wringles	2				
6	Obstetric forceps – Ferguson	1				
7	Bowel SS for placenta	2				
8	Basin SS on stand	2				
9	Douche can SS	2				
10	Bed Pans SS	10				
11	Foetoscope (Ultrasound) & Foetoscope (Pinnard)	1 each				
12	Craniotomy set	1				
13	Vacuum extractor	1				
14	Sim's speculum	4				
15	**Resuscitation Unit consisting of** **-** O_2 therapy unit -Ambu Bag -Laryngoscope -Endotracheal DG Tube	3				
16	CTG (Cardiotocograph)	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……/ ..…/ 2015

B- 5 : Price Schedule for Supply and Installation Opthalmology and ENT Diagnostic & Treatment Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Ophthalmic unit (chair unit)	1				
2	Retinoscope	1				
3	Doctors stool	1				
4	Slit lamp	2				
5	Keratometer	1				
6	Lensometer	1				
7	AB-Scan	1				
8	Operating Microscope - Ophthalmology	1				
9	Tonometers (Non-Contact)	2				
10	Ophthalmoscope	2				
11	Pure tone Audiometer-clinical	1				
12	Impedance Audiometer	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)Total amount in words; Sri Lankan Rupees ……

Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

Telephone Number - ……. Fax Number - ……

Date ……/ ..../ 2015

B- 6 : Price Schedule for Supply and Installation Operation Theatre Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	A closed loop anaesthesia equipment complete with vaporizer & circle absorber (Anaesthesia work station)	5				
2	Operation tables, 4 section hydraulic	4				
3	Operation tables, 5 section hydraulic-For orthopaedic	1				
4	Laryngoscope (Rigid	2				
5	Patient Warmer	2				
6	Spot Lamp	2				
7	Patient Trolley	1				
8	Surgeon Chair	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……../ ..../ 2015

B- 7 : Price Schedule for Supply and Installation OPD Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Diagnostic Set (Stethoscope, Blood Pressure Apparatus, Thermometer, Hammer, Tuning fork, Tape etc.)	22				
2	Weighing Machine	22				
3	Minor OT instrument set (Surgical & Gyane)	2				
4	Minor OT table	2				
5	Minor OT Ceiling Light	2				
6	X-ray View Box (Single)	22				
7	Air Mattress	2				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number - ……

Date ……/ ..../ 2015

B- 8 : Price Schedule for Supply and Installation Radiology- Investigative Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Computed Radiography (CR) System 500 mA X-ray Machine with IITV	1				
2	Portable X-ray machine (150 mA)	1				
3	Radiology & Dark Room Accessories Lead aprons	1set				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

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Telephone Number - ……. Fax Number -

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Date ……/ ..../ 2015

B- 9 : Price Schedule for Supply and Installation Laboratory Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Binocular Microscope	2				
2	Haemoglobinometer	2				
3	Haematocytometer	2				
4	ESR tube and glass ware	2				
5	Haematology analyzer	1				
6	Frozen section system/Cryostat	1				
7	Colorimeter computerized	1				
8	Balance electronic 10 mg. Accuracy	1				
9	Biochemistry Auto Analyzer (16 channel) with regents	1				
10	Others: -Catheters & Disposables -General Glass ware For Lab.	Lot				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

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(Common Seal of the Company)

Name & address of the Company -

……..……..……

……..

Telephone Number - ……. Fax Number -

……

Date ……/ ..../ 2015

B- 10 : Price Schedule for Supply and Installation General Laboratory Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Deep Freezer (-) 70 deg. C	1				
2	Water bath	2				
3	Centrifuges	1				
4	Incubators	1				
5	Hot air oven	2				
6	BOD incubator	1				
7	Autoclave vertical type	1				
8	Bunsen burners with LPG pipe line	1				
9	Distillation plant 3 L/hrs. Capacity	2				
10	Auto washer pipette	1				
11	Hot plate	2				
12	Refrigerators	2				
13	De-ioniser	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

……

……

…….

Signature of the Bidder ……

…….

(Common Seal of the Company)

Name & address of the Company -

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……..……..……

Name address of the Authorized Officers: ……..……

……..……

……..……..……

Telephone Number - ……. Fax Number -

……

Date ……/ ..…/ 2015

B- 11 : Price Schedule for Supply and Installation of Dental Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Dental Chair Unit	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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Signature of the Bidder ……

…….

(Common Seal of the Company)

Name & address of the Company -

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Name address of the Authorized Officers: ……..……

……..……

……..……..……..……

Telephone Number - ……. Fax Number -

……

Date ……/ ..…/ 2015

B- 12 : Price Schedule for Supply and Installation Blood Bank Equipment

SN	Equipment and instrument	Req. No	Rate per Unit (SLR/INR)	Custom duty, Sales Tax or other taxes (SLR/INR)	Total amount with Custom duty and taxes (SLR/INR)	Total amount without Custom duty and taxes (SLR/INR)
1	Blood bank refrigerator	2				
2	Eliza reader	1				
3	Donation couch	2				
4	Antisera kits, Binoculars microscope, testing plates, glass ware etc.	1				

(Please submit separate forms for any alternate models proposed)

VAT registration number …… (if applicable)

Total amount in words; Sri Lankan Rupees

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…….

Signature of the Bidder ……

……..

(Common Seal of the Company)

Name & address of the Company -

……..……..……

……..

Name address of the Authorized Officers: ……..……

……..……..……

Telephone Number - ……. Fax Number - ……

Date ……/ ..…/ 2015

Annexure C: Manufacturer's Authorization

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the BDS.]

Date: ……..
No.: …….

To: ……..

WHEREAS

We……., who are official manufacturers of ……., having factories at [insert full address of Manufacturer's factories], do hereby authorize …… to submit a bid the purpose of which is to provide the following Goods, manufactured by us ……., and to subsequently negotiate and sign the Contract.

Signed: ……..

Name: ……..

Title: ……

Duly authorized to sign this Authorization on behalf of: ……

Dated on _____ day of _____, _____ .

Annexure D

BID BOND FORM

Whereas ……Hereinafter called "The TENDERER" has submitted his/their Tender dated ……. For the supply and Installation of Medical Equipment to Dickoya Hospital", as per specification schedule annexed. Know all men by these presents that we …….. .. . . …….. (Here in after called the Bank) are bound to the _____ _____. (Here in after called THE PURCHASER) in the sum of ..... ……for which payment well and truly to be made to the said PURCHASER The bank binds itself, its successors and assigns by these presents sealed with the common seal of the said bank this Day of 2015.

The conditions of the obligation are:- .

1. If the TENDERER withdraws his bid during the period of bid validity specified by the TENDERER on the bid form or

2. If the TENDERER having being notified of the acceptance of his bid by the PURCHASER' during the period of Bid validity

a. Fails or refuses to execute the CONTRACT.

Or

b. Fails or refuses to furnish the performance bond. We undertake to pay to the PURCHASER up to the above amount upon receipt of his first written demand, without the PURCHASER having to substantiate his demand PURCHASER will state that the amount claimed by him is due to him owing to the occurrence of one or both conditions, specifying the occurred condition or conditions.

This guarantee will remain in Force up- to and including 120 days after the period at BID validity, and any demand in respect thereof should reach the BANK not later than the above date.

…….
Signature of the Bank

Annexure E

PERFORMANCE BOND FORM

"Supply and installation of Medical equipment to Dickoya Hospital"

Whereas hereinafter Called "The SUPPLIER" has undertaken, in pursuance of CONTRACT dated 2011 to supply and installation of Medical equipment in Kilinochchi and Mullaitivu District.

Hereinafter called "The CONTRACT" and where as it has been by you in the said CONTRACT that the SUPPLIER shall furnish you with a "Bank. Guarantee" by a recognized Bank for the sum specified herein as security for compliance with the SUPPLIER's performance obligation in accordance with the CONTRACT and whereas we agreed to give the SUPPLIER a Guarantee.

Thereof we hereby affirm that we are guarantors and responsible to you on behalf of SUPPLIER, up to a total of and we undertake to pay you upon, your first written demand declaring the SUPPLIER to be in default under the CONTRACT and without cavil or argument any sum or sums within the limits of ..... as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein. This guarantee is valid until the ..... day of 2015..

……..
Signature and the Seal of the Bank

..... We understand that you are not bound to accept the lowest or any tender you may receive Dated this ……...……day of …… Two Thousand and Eleven.

Signature ……..

……in the capacity of …… duly authorized to sign tenders for and on behalf of ……
……
……(Name and Address of the company)

(IN BLOCK CAPITAL LETTERS)

Name : _____
_____
_____

WITNESSES
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Address:
.....
Signature:
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Name
.....
Address:
.....
Signature: